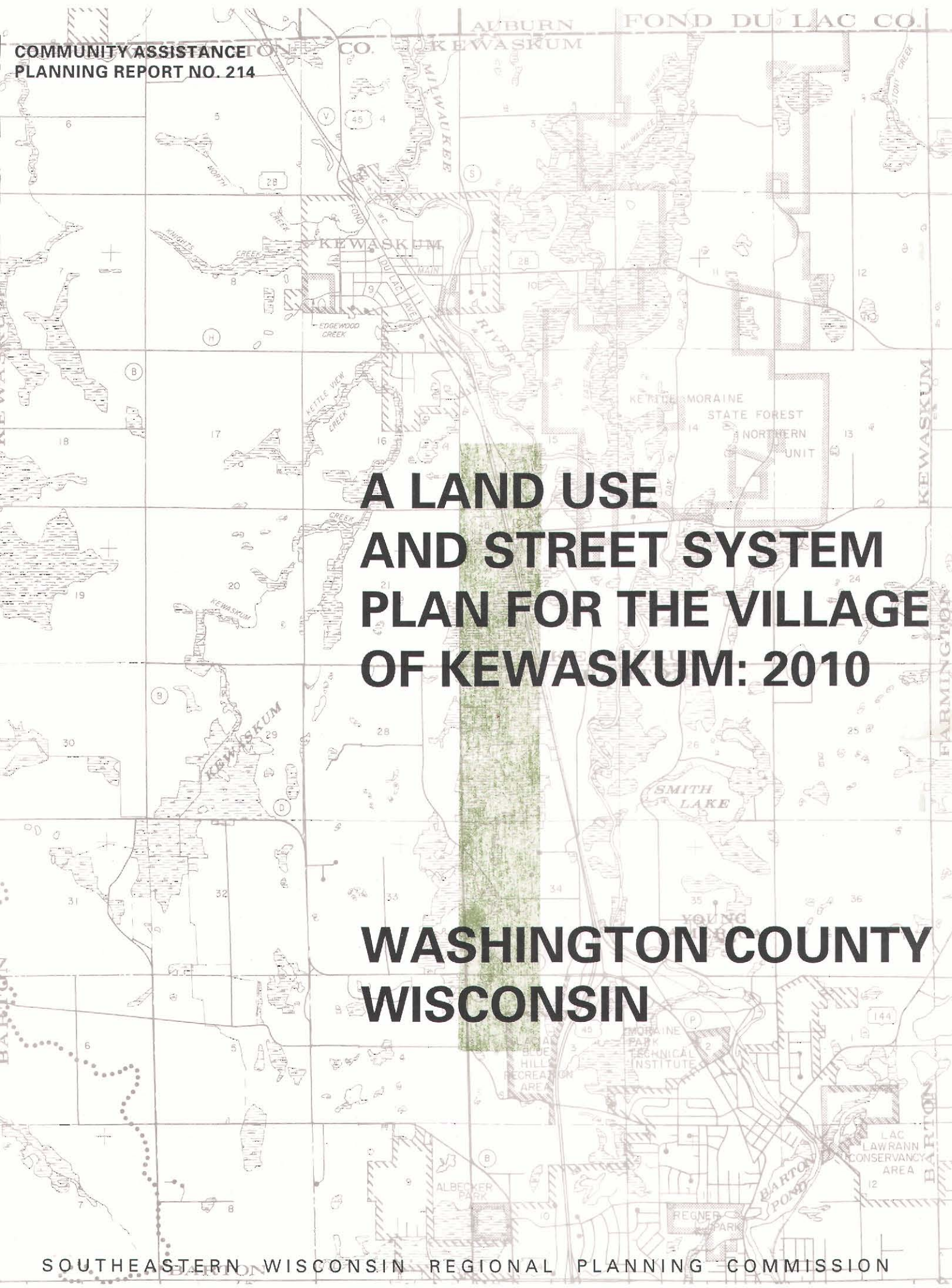
COMMUNITY ASSISTANCE
PLANNING REPORT NO. 214



A LAND USE AND STREET SYSTEM PLAN FOR THE VILLAGE OF KEWASKUM: 2010

WASHINGTON COUNTY WISCONSIN

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Acknowlegement is due former Village Plan Commission members David A. Goeden, Thomas J. McElhatton, Donald Mlodzik, Mark D. Slaugenhaup, John P. Stephani, Gerald F. Stollenwerk, and Paul D. Ziebert for their contribution to the preparation of the Village of Kewaskum land use and street system plans.

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Special acknowledgement is due Richard R. Kania, RLA, AICP, SEWRPC Principal Planner, Vanessa L. Opel, SEWRPC Planning Draftsman, and Tami J. Dake, former SEWRPC Senior Planning Draftsman, for their efforts in the conduct of this study and in the preparation of this report.

COMMUNITY ASSISTANCE PLANNING REPORT
NUMBER 214

A LAND USE AND STREET SYSTEM PLAN FOR THE VILLAGE OF KEWASKUM: 2010

WASHINGTON COUNTY, WISCONSIN

Prepared by the

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

September, 1997

Inside Region $ 5.00
Outside Region $10.00

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SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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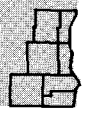

September 8, 1997

The Honorable Robert H. Wagner
President of the Village of Kewaskum
and Members of the Village Board
and Village Plan Commission
204 First Street
Kewaskum, Wisconsin 53040

Ladies and Gentlemen:

By contractual agreement dated August 17, 1992, the Village of Kewaskum requested that the Southeastern Wisconsin Regional Planning Commission assist the Village in the preparation of a land use and street system plan for the Village and environs. The planning effort was initiated in late 1992 and the Regional Planning Commission staff, working with Village staff and officials, has now completed the requested plan, which is presented in this report. The plan is intended to be used by Kewaskum officials as a tool to help guide land use development in the Village and environs. Consistent application of the plan over time will help to ensure that individual development proposals are properly related to a sound development pattern for the Village as a whole.

In addition to setting forth the land use and street system plan and supporting plan implementation devices for the Village, this report presents pertinent information on the major factors affecting land use and street system development in the Kewaskum area, including information on existing and probable future resident population, household, and employment levels; the natural resource base; existing land uses; and existing local plan implementation devices. The plan includes a set of recommended development objectives, together with supporting principles, standards, and urban design guidelines.

The land use and street system plan presented in this report was adopted by the Village Plan Commission on June 10, 1997, and by the Village Board on June 23, 1997.

The Regional Planning Commission staff appreciates the assistance provided by the Village of Kewaskum staff and officials in the preparation of the plan. The Commission staff stands ready to assist the Village in implementing the adopted plan over time.

Sincerely,

Philip C. Evenson

Philip C. Evenson
Executive Director

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Chapter I

INTRODUCTION

The State municipal planning enabling act, set forth in Section 62.23 of the Wisconsin Statutes, provides for the creation of municipal plan commissions and charges those commissions with the responsibility of creating and adopting a "master," or comprehensive, plan for the physical development of the municipality, including any areas outside of its boundaries which may affect development of the municipality. The scope and content of the comprehensive plan, as set forth in the Statutes, is very broad, extending to all aspects of the physical development of a community. The Statutes indicate that the plan shall be prepared for the general purpose of guiding and accomplishing a coordinated, adjusted, and harmonious development of the municipality which will, in accordance with existing and future needs, best promote the public health, safety, morals, order, prosperity, and general welfare, as well as fostering efficiency and economy in the process of development.

Acting in accordance with this statutory charge, the Village of Kewaskum on August 17, 1992, requested the Southeastern Wisconsin Regional Planning Commission to assist the Village Plan Commission in the development of two key elements of a comprehensive plan for the Village, a land use plan and a supporting street system plan. These plans, while primarily intended to meet local development objectives, are also intended to carry pertinent regional plan elements into greater depth and detail as is necessary for sound community development. This report sets forth land use and street system plans for the Village of Kewaskum and environs.

The planning effort involved extensive inventories and analyses of the factors and conditions affecting land use and street system development in the Kewaskum planning area, including the preparation of forecasts of resident population and employment levels in the planning area; inventories of the natural resource base and existing land uses of the planning area; an inventory of existing local plan implementation devices; the formulation of a set of recommended development objectives and supporting standards, including urban design guidelines, for the Village and surrounding areas; careful analyses of the inventory findings; and the preparation of land use and street system plans which best meet the Village development objectives. The plans, when adopted by the Village Plan Commission and the Village Board, are intended to serve as a guide to Village officials in making development decisions within the Village of Kewaskum and environs. The planning effort also included a review of existing plan implementation measures and devices needed to help carry out the recommended plans over time with particular emphasis upon any needed revisions to the Village zoning and land subdivision control ordinance.

THE PLANNING AREA

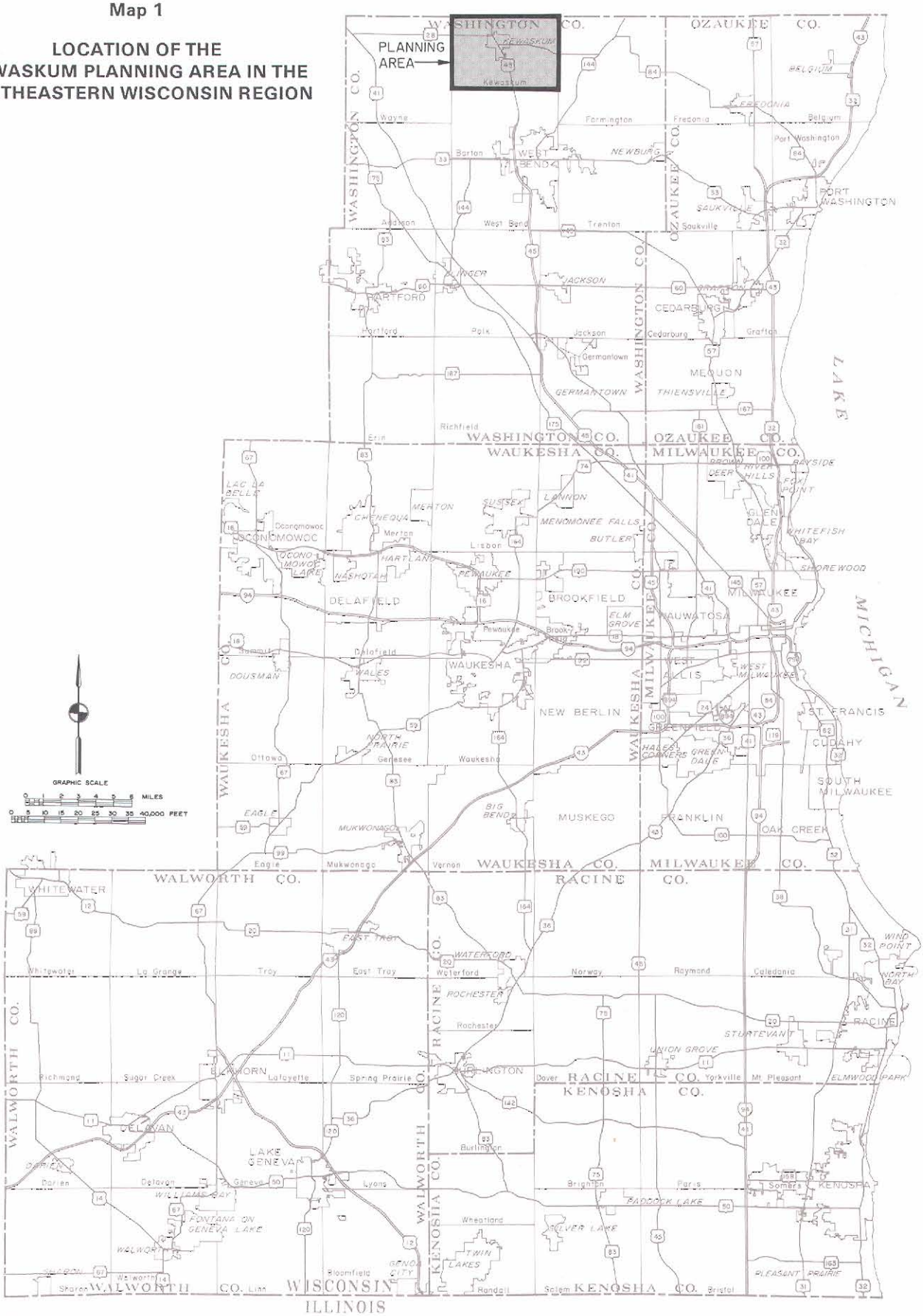
The Kewaskum planning area as herein considered is located in the north-central portion of Washington County, as shown on Map 1, and consists of all of the Town and Village of Kewaskum. The planning area encompasses approximately 24.3 square miles, consisting of U. S. Public Land Survey Sections 1 through 24, Township 12 North, Range 19 East. Of this total planning area, the Village of Kewaskum, within its 1992 corporate limits, encompassed about 1.3 square miles, or about 5 percent. The remaining approximately 22.9 square miles, or about 94 percent of the planning area, consisted of the Town of Kewaskum. Much of the Town lies within the extraterritorial plat review jurisdiction of the Village, that is, within one-and-one-half miles of the Village corporate limits.

COMMUNITY HISTORY

The settlement of Southeastern Wisconsin by Europeans began shortly after the U. S. Public Land Survey was completed in the area in 1836. In the Kewaskum area, this settlement was accompanied by the conversion of land from native vegetation to agricultural and urban uses. Settlers were attracted to this area because of the suitability of the soils and climate for agriculture and the presence of the Milwaukee River with its potential for the development of water-powered mills.

Map 1

LOCATION OF THE KEWASKUM PLANNING AREA IN THE SOUTHEASTERN WISCONSIN REGION



Source: SEWRPC.

The initially unincorporated Village was founded by a pioneer named Jesse H. Myers in 1852. The Village was named after a native Indian chief. Mr. Myers constructed a sawmill on the site, while E. W. Buchtel erected the first blacksmith shop. Shortly thereafter, Henry P. Eames built the first frame house close to the River in the Village, and in 1854 Mr. Myers began construction of a flour mill, completed two years later.

The Village was incorporated on May 7, 1895. During its early history, the Village was almost totally dependent on agriculture and agriculture-related businesses and services. The completion of the Chicago & North Western Railway (presently Fox River Valley Railroad) from Milwaukee to Fond du Lac through the Village in the early 1870s brought new business and commercial linkages. In the 1920s, with the introduction of the automobile and motor truck, the Village economy began to shift from an agricultural base to an industrial base with the establishment of the Kewaskum Aluminum Company in the Village. This company is presently known as Regal Ware, Inc., the largest independently owned cookware manufacturer in North America. The pattern of historic urban development in the Kewaskum planning area is depicted on Map 2.

THE COMMUNITY COMPREHENSIVE PLANNING PROCESS

The recommended plans presented in this report were developed through a planning process consisting of the following seven steps: 1) a comprehensive inventory of the factors affecting land use and street system development and redevelopment in the Village and environs, 2) a careful analysis of the inventory data, 3) the formulation of community development objectives, principles, standards, including related urban design guidelines, 4) the identification of land use and related facility needs in the planning area through the year 2010 based, in part, upon the resident population and employment forecasts and the agreed upon development objectives and standards, 5) the development and evaluation of alternative land use plans and supporting street system plans, 6) the selection of a recommended land use plan and a recommended street system plan, and 7) the recommendation of plan implementation measures. The comprehensive planning process utilized is diagrammed in Figure 1.

Inventory and Analysis

Reliable planning data are essential for the formulation of workable development plans. Consequently, an inventory of existing conditions is the first step in the planning process. The crucial nature of factual information in the planning process should be evident, since no reliable forecasts can be made or alternative courses of action evaluated without knowledge of the current state of the system being planned. The sound development of land use and supporting street system plans must consider the existing development pattern, the potential demand for each of the various major land use categories and related development potentials and constraints, and the underlying natural resource and public utility base and the ability of these bases to support development.

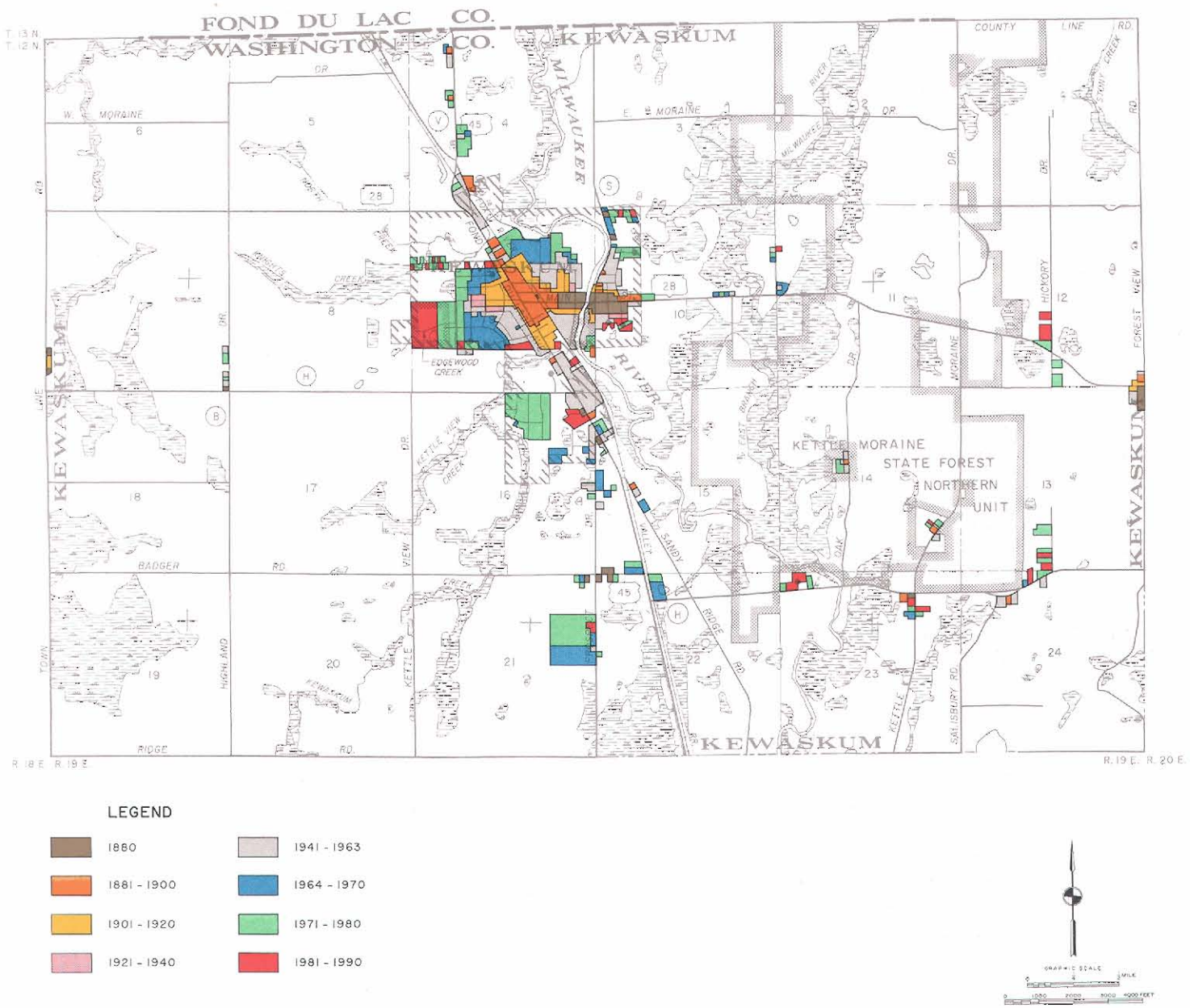
The necessary inventory and analyses not only provide data describing the existing conditions, but also provide a basis for identifying existing and potential problems in the planning area and opportunities for development. The inventory data are also crucial to the forecasting of future community land use and facility needs, formulating alternative plans, and evaluating such plans.

Formulation of Community Development Objectives, Principles, Standards, and Related Urban Design Guidelines

An objective is defined as a goal or end toward the attainment of which plans and policies are directed. Planning is a rational process for formulating and attaining objectives. The objectives serve as a guide to the preparation of alternative plans and provide an important basis for the evaluation of these alternatives and the selection of a recommended plan from among the alternatives considered. The community plans should be clearly related to the defined objectives through a set of standards and urban design guidelines. Objectives may change as new information is developed, as objectives are fulfilled through plan implementation, or as objectives fail to be implemented because of changing public attitudes and values. The formulation of objectives should involve the active participation of elected and appointed local officials and knowledgeable and concerned citizens. The statutory composition of the Village Plan Commission includes both key elected and appointed local official and citizen

Map 2

HISTORIC URBAN GROWTH IN THE KEWASKUM PLANNING AREA: 1880-1990



LEGEND

1880	1941 - 1963
1881 - 1900	1964 - 1970
1901 - 1920	1971 - 1980
1921 - 1940	1981 - 1990

Source: SEWRPC.

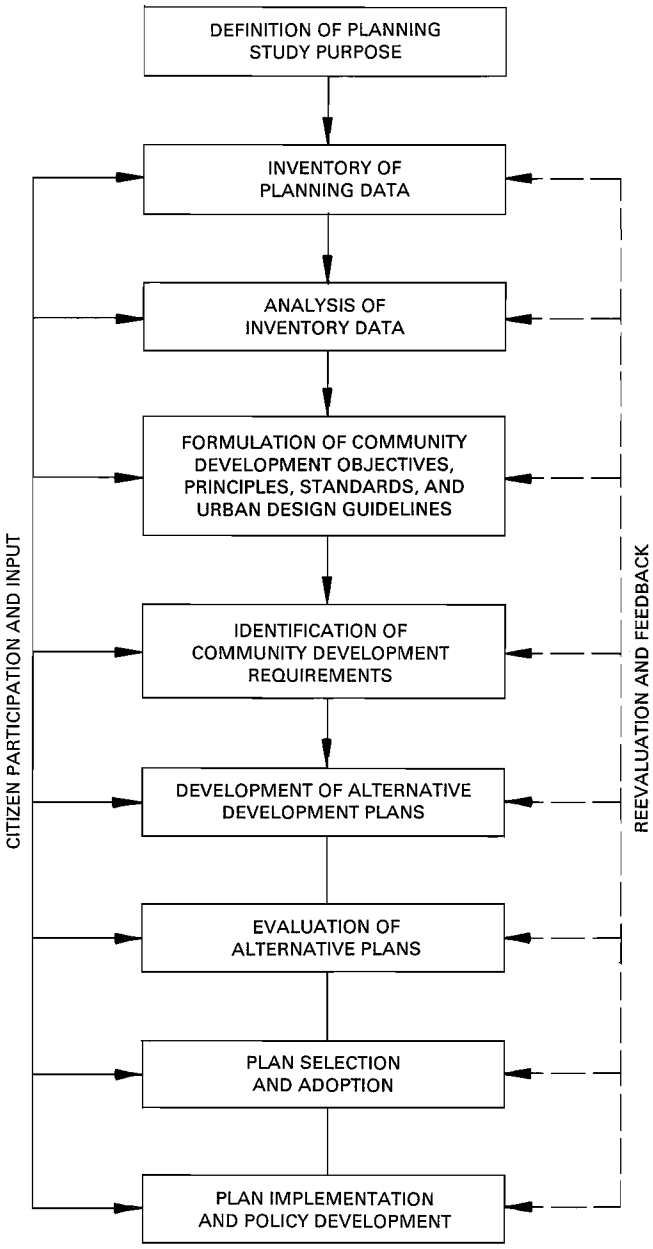
members. The Commission provides the active guidance needed by the technical staffs engaged in the planning process.

Identification of Community Land Use and Facility Requirements

Although the preparation of forecasts is not planning, a land use plan and a street system plan must, to the extent possible, anticipate future land and facility requirements as a basis for the development of alternative plans. The future demand for land use and travel will depend primarily upon the size of the future resident population and the nature of future economic activity within the Village. Control of changes in population and employment levels,

Figure 1

THE COMMUNITY DEVELOPMENT PLANNING PROCESS



Source: SEWRPC.

however, lies largely, although not entirely, outside the scope of government activity at the local level. Future populations and economic activity levels must therefore be forecast. These levels are then used to determine the probable future demand for various types of land uses and travel.

Development and Evaluation of Alternative Plans and Selection and Adoption of a Recommended Plan

Having estimated the probable future demand for a variety of land use types and supporting facilities including street system development, alternative plans which meet the probable demand can be developed. The alternative plans should be evaluated based upon their relative ability to attain the agreed upon development objectives; the plans which are judged best to meet those objectives should be selected for adoption. The evaluation should be made by the Village Plan Commission. The evaluation and selection involve the application of information obtained during all stages of the planning process.

Plan Implementation

Implementation of the adopted land use plan and street system plan requires the use of several planning tools of a legal nature. A zoning ordinance and accompanying zoning district map should be used to assure legally that private development and redevelopment will occur in conformance with the adopted plan and plan elements. The zoning regulations should govern not only the types of land uses permitted in various parts of the community, but the height and arrangement of buildings on the land, the intensity of the use of land, and needed supporting facilities including streets which are required to carry out the intent of the development plans.

Land subdivision regulations should be applied to assure that any proposed land subdivision plats and certified survey maps conform to the adopted plans with respect both to proposed land uses and to such details as street, block and lot layout, and required infrastructure improvements. An official map should be used to assure that the land required for the streets, parkways, parks, and playgrounds needed to serve the uses recommended in the land use plan is reserved for future public use. Implementation of the plans should also be furthered by the formulation of public policies that promote and ensure plan implementation. A capital improvements program is one particularly effective expression of such policies relating to the physical development and redevelopment of the community.

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Chapter II

POPULATION AND EMPLOYMENT INVENTORIES, ANALYSES, AND FORECASTS

Information on the size, characteristics, and distribution of the resident population, on economic activity, and on anticipated changes in these socio-economic factors over time is essential to the preparation of sound community land use and street system plans. The size and characteristics of the existing and probable future resident population and employment in the planning area have a direct influence on land use requirements and needs. The primary purpose of the land use and street system plans is to meet those requirements and needs in an environmentally sound, efficient, and effective manner, and thereby benefit community residents by maintaining and enhancing living and working conditions.

As described in Chapter I of this report, the year 2010 was selected as the design year for plan preparation purposes. To determine the probable year 2010 demand for various types of land uses, such as residential, commercial, and industrial uses, it is necessary to forecast year 2010 population and employment levels and to compare those forecast levels to those that existed in 1990. The potential increase in population and employment between 1990 and 2010 can then be determined and the land use and street system plans designed to accommodate the expected increase. For comparative purposes, tables in this chapter presenting year 2010 forecast population and employment levels will also include information on 1980 and 1990 levels. It is important to note that forecast population and employment levels were prepared by using 1980 base data since 1990 census data were not available at the time the forecasts were prepared.

Population and employment forecasts for the Village of Kewaskum assume that the corporate boundaries of the Village will be larger in the plan design year 2010 than they are at present. Areas will be annexed into the Village in order to extend urban services, such as public water and sanitary sewer services, to developing areas and thereby to accommodate urban growth in an environmentally sound manner. For this reason, population and employment forecasts are based on an "urban service area" that includes not only the area within the corporate limits of the Village but also the additional contiguous lands needed to accommodate anticipated new urban development. Historic population and employment census data for the Village of Kewaskum are based on the corporate boundaries of the Village.

POPULATION AND EMPLOYMENT FORECASTS

The population and employment forecasts selected for use in the planning for the Kewaskum area were based on a consideration of a range of alternative future population and employment levels developed for the seven-county Southeastern Wisconsin Region by the Regional Planning Commission. Three alternative future scenarios were postulated by the Commission for use in preparing the year 2010 regional land use plan. Two scenarios, the "high-growth" scenario and the "low-growth" scenario, are intended to identify reasonable extremes. An "intermediate-growth" scenario was also developed, intended to identify a most probable future between the extremes. These three scenarios are described in the following sections.[1]

High-Growth Future Scenario

The high-growth future scenario envisions that the Region as a whole will experience only a slight decline in household[2] size, with a return to more conventional lifestyles and somewhat higher birth rates. This future also assumes that the Region will be economically competitive with other areas of the

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[1]*For a detailed description of the methodology used to develop these projections, see SEWRPC Technical Report No. 25, Alternative Futures for Southeastern Wisconsin, 1980; Technical Report No. 11 (2nd Edition), The Population of Southeastern Wisconsin, 1984; and Technical Report No. 10 (2nd Edition), The Economy of Southeastern Wisconsin, 1984.*

[2]*Households include persons who live alone; unrelated persons who live together, such as college roommates; and families. Persons not living in households are classified as living in group quarters, such as hospitals for the chronically ill, homes for the aged, correctional institutions, and college dormitories.*

United States over the next two decades and that the pattern of out-migration of population, economic activity, and jobs experienced in the recent past will subside. This greater attractiveness of the Region would be due to such factors as a good source of high-quality water and other raw materials, particularly agricultural materials; a good labor force; a good infrastructure system, including railways, highways, seaports, airports, and sewerage and water supply systems; a good vocational-technical education system; a healthful and attractive environment; good recreational opportunities; and receptive community attitudes toward the needs of business and industry.

Intermediate-Growth Future Scenario

The intermediate-growth future scenario assumes that even though some out-migration of population and jobs will continue, the relative attractiveness of the Region compared to other regions of the United States will result in a stabilization of population and employment. The assumptions underlying this future include replacement-level birthrates and a slight decline in household size. There would be some decrease in the younger age groups; the retirement-age population would be expected to show a significant increase.

Low-Growth Future Scenario

The low-growth future scenario envisions continued out-migration of population and jobs from the Region. This would be due, in part, to a decline in the ability of the Region to compete with other regions of the United States for economic activity and in part to a growth in nontraditional lifestyles, including lower-than-replacement-level birthrates, continuing declines in household size, and increasing female participation in the labor force.

Population Distribution

An additional variable was added to the analysis of each scenario described above. That variable deals with the degree of centrality of incremental urban land use development as measured by the relative nearness of new urban land uses to the major population centers of the Region. Two alternative population distributions, referred to as "centralized" and "decentralized" population distributions, were developed.

The centralized distribution concentrates population in the older urban centers of the Region, such as the Cities of Milwaukee, Racine, and Kenosha and adjacent suburbs, with proportionately fewer people in outlying areas. The centralized distribution assumes that a significant proportion of the population will prefer to reside in an urban setting that provides a full range of urban facilities and services, such as public water supply, sanitary sewers, and mass transit. The decentralized distribution accommodates proportionately less people in the older urban centers and adjacent suburbs, and proportionately more in the outlying areas. The decentralized distribution assumes that a significant proportion of the population will prefer to reside in a suburban or rural setting with relatively large lots and a reduced level of urban services.

Decentralization of population within the Region began in the 1950s and has continued unabated to the present. The movement of persons from the older, urban central areas of the Region to outlying areas has markedly changed the development pattern of the Region, requiring outlying areas to provide many of the facilities and services once required only in the older, more highly developed urban areas of the Region.

Selected Forecast

Table 1 shows the population and employment levels envisioned under various future scenarios for the Southeastern Wisconsin Region, Washington County, the Kewaskum planning area, and the Village of Kewaskum urban service area. Upon consideration of the five alternative future scenarios postulated, the intermediate future, within the framework of a decentralized population distribution, was selected by the Village as the basis for the preparation of the land use and street system plans for the Village of Kewaskum and environs. This scenario was selected based upon the historic and current trends in the Kewaskum planning area, including recent increases in Village resident population and housing development. Under the selected forecast, the population in the urban service area would be expected to increase from about 2,500 persons in 1990 to about 4,100 persons by 2010, an increase of about 1,600 persons, or over 60 percent; the number of jobs would be expected to increase from about 1,500 in 1990 to about 2,300 by 2010, for an increase of about 800 jobs, or over 50 percent.

To set the selected forecast in perspective, the historic population levels of the State, the Region, Washington County, and the Village of Kewaskum are presented in Table 2. Figure 2 shows graphically the historic and forecast future resident population levels for the Village of Kewaskum urban service area on the basis of the five alternative future scenarios considered.

Table 1

ALTERNATIVE POPULATION AND EMPLOYMENT FORECASTS FOR THE SOUTHEASTERN WISCONSIN REGION, WASHINGTON COUNTY, THE KEWASKUM PLANNING AREA, AND THE VILLAGE OF KEWASKUM URBAN SERVICE AREA: 1980, 1990, AND 2010

Demographics	1980	1990	Alternative 2010 Forecasts[a]				
			Low-Growth	Intermediate-Growth		High-Growth	
			Decentralized	Centralized[b]	Decentralized	Centralized	Decentralized
Region[c]							
Population	1,764,796	1,810,364	1,517,100	1,911,000	1,872,200	2,316;100	2,316,100
Jobs	884,200	990,300	870,900	1,095,000	1,051,300	1,251,600	1,251,600
Washington County							
Population	84,848	95,328	91,100	111,700	134,600	149,000	185,000
Jobs	31,400	41,800	41,000	47,900	52,700	56,900	66,100
Kewaskum Planning Area							
Population	3,624	3,653	3,410	3,850	4,940	5,450	8,080
Jobs	1,860	1,740	1,980	2,180	2,390	2,510	2,920
Village of Kewaskum Urban Service Area							
Population	2,381[d]	2,514[d]	2,590	2,940	4,060	4,470	7,140
Jobs	1,630	1,540	1,870	2,070	2,290	2,400	2,820

[a]Forecast data were prepared using 1980 base data and may not reflect changes in population and employment which occurred between 1980 and 1990.

[b]The figures in this column reflect the adopted regional land use plan and differ somewhat from the figures for the intermediate-growth decentralized alternative future scenario because of a modest adjustment made to reflect the effects of the 1990 Federal Census.

[c]Region includes Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha Counties.

[d]Data are based on the Village of Kewaskum corporate limits.

Source: U. S. Bureau of the Census; U. S. Bureau of Economic Analysis; Wisconsin Department of Industry, Labor and Human Relations; and SEWRPC.

AGE DISTRIBUTION

The historical and future age composition, under the five alternative future scenarios, for the Southeastern Wisconsin Region, Washington County, the Kewaskum planning area, and the Village of Kewaskum urban service area are set forth in Table 3. The table indicates distinctly different population growth rates and changes for the various age groups under the alternatives considered. While the intermediate-decentralized land use scenario was selected for use in plan preparation, age composition data for the other future scenarios are provided for informational purposes.

The anticipated changes in the age composition of the resident population of the Kewaskum planning area as set forth in Table 3 have important implications for land use. The school-age population, the age group from five to 19, within the planning area may be expected to range from about 720 children under the low-growth forecast to about 1,690 children under the high-growth forecast. This range runs from a decrease of about 20 percent from, to an increase of about 88 percent over, the 1990 school-age population. If the future population reaches the higher end of the forecast range, there may be a need for additional educational and ancillary recreation facilities within the Kewaskum planning area. The number of working-age adults, ages 20 through 64, in the planning area may be expected to range from about 2,000 persons to about 4,650 persons under the low- and high-growth forecast, respectively. This range represents a decrease of about 4 percent to an increase of about 122 percent over the year 1990 labor force. Accordingly, the number of persons seeking work within the Village urban service area and surrounding areas may be expected to increase significantly if the population reaches the higher end of this

Table 2

COMPARISON OF HISTORIC POPULATION LEVELS FOR THE STATE OF WISCONSIN, THE SOUTHEASTERN WISCONSIN REGION, WASHINGTON COUNTY, AND THE VILLAGE OF KEWASKUM: 1850-1992

	Wisconsin		Region		Washington County		Village of Kewaskum[a]	
Year	Population	Percent Change from Previous Period	Population	Percent Change from Previous Period	Population	Percent Change from Previous Period	Population	Percent Change from Previous Period
1850	305,391	--	113,389	--	19,485[b]	--	--	--
1860	775,881	154.1	190,409	67.9	23,622	21.2	--	--
1870	1,054,670	35.9	223,546	17.4	23,919	1.3	--	--
1880	1,315,497	24.4	277,119	24.0	23,422	-2.0	--	--
1890	1,693,330	28.7	386,774	39.6	22,751	-2.9	--	--
1900	2,069,042	22.2	501,808	29.7	23,589	3.7	679	--
1910	2,333,860	12.8	631,161	25.8	23,784	0.8	625	-8.0
1920	2,632,067	12.8	783,681	24.2	25,713	8.1	707	13.1
1930	2,939,006	11.7	1,006,118	28.4	26,551	3.3	799	13.0
1940	3,137,587	6.8	1,067,699	6.1	28,430	7.1	880	10.1
1950	3,434,575	9.5	1,240,618	16.2	33,902	19.2	1,183	34.4
1960	3,952,777	15.1	1,573,614	26.8	46,119	36.0	1,572	32.9
1970	4,417,821	11.8	1,756,083	11.6	63,839	38.4	1,926	22.5
1980	4,705,642	6.5	1,764,796	0.5	84,848	32.9	2,381	23.6
1990	4,891,769	4.0	1,810,364	2.6	95,328	12.4	2,514	5.6
1992[c]	4,968,224	1.6	1,839,503	1.6	99,444	4.3	2,658	5.7

[a] *The Village of Kewaskum was incorporated on May 7, 1895.*

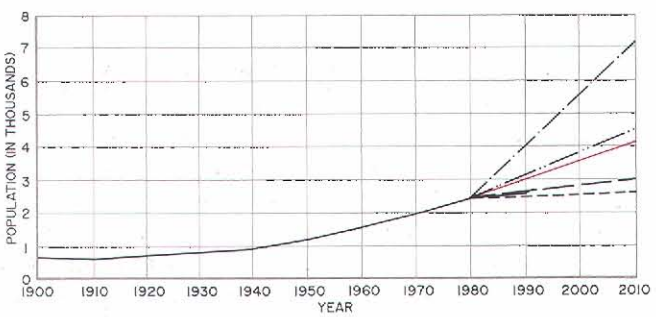
[b] *In 1853, seven towns (Belgium, Cedarburg, Fredonia, Grafton, Mequon, Port Washington, and Saukville) and the Village of Port Washington, then in Washington County, with a resident population of 8,281 persons in 1850, were detached from the remainder of Washington County to form Ozaukee County.*

[c] *Data are estimates.*

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

Figure 2

HISTORIC AND FORECAST FUTURE POPULATION LEVELS FOR THE VILLAGE OF KEWASKUM URBAN SERVICE AREA: 1900-2010[a]



LEGEND

- HISTORIC POPULATION[b]
- HIGH-GROWTH DECENTRALIZED FORECAST
- HIGH-GROWTH CENTRALIZED FORECAST
- INTERMEDIATE-GROWTH DECENTRALIZED FORECAST[c]
- INTERMEDIATE-GROWTH CENTRALIZED FORECAST
- LOW-GROWTH DECENTRALIZED FORECAST

[a] *The Village of Kewaskum was incorporated on May 7, 1895.*

[b] *1992 is an estimated population level for the Village of Kewaskum urban service area while all other years are actual population levels for the Village of Kewaskum corporate limits.*

[c] *Selected forecast.*

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

forecast range. Finally, the increase in the population 65 years of age and older under all of the alternative forecast scenarios considered may be expected to increase the demand for elderly housing units and special transportation and health care needs within the planning area.

HOUSING CHARACTERISTICS

General Housing Characteristics

As shown in Table 4, there was a steady increase in both the number of housing units and the population in the Southeastern Wisconsin Region, Washington County, the Kewaskum planning area, and the Village of Kewaskum between 1970 and 1990. The table also demonstrates that the rate of increase in the number of housing units exceeded the rate of population increase in each of the areas listed on the table. With the number of households increasing at a faster rate than the population, household size throughout the Region has steadily decreased.

Between 1970 and 1990, Table 4 indicates the total number of housing units in the Region increased by about 27 percent, while in the County and Vil-

Table 3

ACTUAL AND ALTERNATIVE FORECAST RANGE FOR COMPOSITION OF THE RESIDENT POPULATION BY AGE GROUP IN THE SOUTHEASTERN WISCONSIN REGION, WASHINGTON COUNTY, THE KEWASKUM PLANNING AREA, AND THE VILLAGE OF KEWASKUM URBAN SERVICE AREA: 1990 AND 2010

Age Group (years)	1990 Actual		Alternative 2010 Forecasts									
			Low-Growth		Intermediate-Growth				High-Growth			
			Decentralized		Centralized		Decentralized		Centralized		Decentralized	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Southeastern Wisconsin Region												
Under 5	138,444	7.6	80,100	5.3	113,130	5.9	110,830	5.9	150,547	6.5	150,547	6.5
5 to 19	390,045	21.5	271,710	17.9	355,440	18.6	348,230	18.6	459,283	19.8	459,283	19.8
20 to 64	1,055,404	58.4	947,280	62.4	1,172,020	61.3	1,148,220	61.3	1,382,711	59.7	1,382,711	59.7
65 and Older	226,471	12.5	218,010	14.4	270,410	14.2	264,920	14.2	323,559	14.0	323,559	14.0
Total	1,810,364	100.0	1,517,100	100.0	1,911,000	100.0	1,872,200	100.0	2,316,100	100.0	2,316,100	100.0
Washington County												
Under 5	7,240	7.6	5,990	6.6	7,610	6.8	9,170	6.8	10,310	6.9	12,800	6.9
5 to 19	22,278	23.4	19,850	21.8	24,160	21.6	29,110	21.6	31,940	21.5	39,670	21.5
20 to 64	55,868	58.6	54,270	59.6	65,380	58.5	78,780	58.5	86,320	57.9	107,170	57.9
65 and Older	9,942	10.4	10,990	12.0	14,550	13.1	17,540	13.1	20,430	13.7	25,360	13.7
Total	95,328	100.0	91,100	100.0	111,700	100.0	134,600	100.0	149,000	100.0	185,000	100.0
Kewaskum Planning Area												
Under 5	247	6.8	250	7.3	290	7.5	360	7.3	410	7.5	580	7.2
5 to 19	897	24.5	720	21.1	830	21.6	1,050	21.2	1,170	21.5	1,690	20.9
20 to 64	2,094	57.3	2,000	58.7	2,230	57.9	2,860	57.9	3,130	57.4	4,650	57.5
65 and Older	415	11.4	440	12.9	500	13.0	670	13.6	740	13.6	1,160	14.4
Total	3,653	100.0	3,410	100.0	3,850	100.0	4,940	100.0	5,450	100.0	8,080	100.0
Village of Kewaskum Urban Service Area												
Under 5	181	7.2	180	7.0	210	7.1	280	6.9	320	7.2	490	6.9
5 to 19	596	23.7	550	21.2	640	21.8	860	21.2	960	21.5	1,490	20.9
20 to 64	1,436	57.1	1,520	58.7	1,710	58.2	2,360	58.1	2,510	57.5	4,120	57.7
65 and Older	301	12.0	340	13.1	380	12.9	560	13.8	620	13.8	1,040	14.5
Total	2,514[a]	100.0	2,590	100.0	2,940	100.0	4,060	100.0	4,470	100.0	7,140	100.0

[a] *Data are based on the Village of Kewaskum corporate limits.*

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

lage the number of units increased by about 84 and 61 percent, respectively. Of the past total number of housing units, the Southeastern Wisconsin Region experienced an increase in owner-occupied housing units of about 25 percent while Washington County and the Village of Kewaskum experienced increases of 86 and 50 percent, respectively, between 1970 and 1990. The increase in the Village was twice as high as that experienced by the Region as a whole. With respect to renter-occupied housing units during the same period, the Region experienced an increase of about 28 percent, while the County and the Village experienced significantly higher increases of 102 and 93 percent, respectively. The increase in renter-occupied housing is due to such lifestyle changes as more single-person households and smaller families and to the increasing urbanization of the Kewaskum area. While the number of housing units were increasing during the 1970 through 1990 time period, Table 4 indicates the total number of persons per occupied housing unit decreased by about 18 percent in the Region, 21 percent in Washington County, 18 percent in the Kewaskum planning area, and 19 percent in the Village of Kewaskum. The decline in the number of persons per household can be attributed to an increase in the number of one-person households and a decrease in the number of children per family.

Household Size

The number and size of households is important in land use and public facility planning, because the average household size is used to convert a population forecast to the number of housing units needed over the planning period. Throughout the Region, the number of households has been increasing at a faster rate than the total household population. Table 5 compares historic and forecasts year 2010

Table 4

HISTORIC POPULATION AND HOUSING CHARACTERISTICS OF THE SOUTHEASTERN WISCONSIN REGION, WASHINGTON COUNTY, THE KEWASKUM PLANNING AREA, AND THE VILLAGE OF KEWASKUM: 1970, 1980, AND 1990

Southeastern Wisconsin Region

Characteristics	1970[a]		1980[a]		1990		Change: 1970-1980		Change: 1980-1990	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent	Number	Percent
Population										
Household	1,714,200	97.6	1,724,567	97.7	1,769,120	97.7	10,367	0.6	44,553	2.6
Group Quarters	41,687	2.4	40,352	2.3	41,244	2.3	-1,335	-3.2	892	2.2
Total	1,755,887	100.0	1,764,919	100.0	1,810,364	100.0	9,032	0.5	45,445	2.6
Housing Unit Type										
Owner-Occupied	331,339	58.5	389,381	58.5	414,049	57.7	58,042	17.5	24,668	6.3
Renter-Occupied	205,147	36.2	238,574	35.9	262,058	36.6	33,427	16.3	23,484	9.8
Vacant for Sale	2,379	0.4	4,478	0.7	3,830	0.5	2,099	88.2	-648	-14.5
Vacant for Rent	9,101	1.6	11,205	1.7	12,615	1.8	2,104	23.1	1,410	12.6
Other Vacant[b]	18,790	3.3	21,335	3.2	24,623	3.4	2,545	13.5	3,288	15.4
Total	566,756	100.0	664,973	100.0	717,175	100.0	98,217	17.3	52,202	7.9
Persons per Occupied Housing Unit	3.20	--	2.75	--	2.62	--	-0.45	-14.1	-0.13	-4.7

Washington County

Characteristics	1970		1980		1990		Change: 1970-1980		Change: 1980-1990	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent	Number	Percent
Population										
Household	63,135	98.9	83,946	98.9	94,271	98.9	20,811	33.0	10,325	12.3
Group Quarters	704	1.1	902	1.1	1,057	1.1	198	28.1	155	17.2
Total	63,839	100.0	84,848	100.0	95,328	100.0	21,009	32.9	10,480	12.4
Housing Unit Type										
Owner-Occupied	13,123	70.2	20,314	71.6	24,383	70.9	7,191	54.8	4,069	20.0
Renter-Occupied	4,262	22.8	6,402	22.6	8,594	25.0	2,140	50.2	2,192	34.2
Vacant for Sale	100	0.5	288	1.0	125	0.4	188	188.0	-163	-56.6
Vacant for Rent	124	0.7	240	0.9	241	0.7	116	93.5	1	0.4
Other Vacant[b]	1,083	5.8	1,119	3.9	1,039	3.0	36	3.3	-80	-7.1
Total	18,692	100.0	28,363	100.0	34,382	100.0	9,671	51.7	6,019	21.2
Persons per Occupied Housing Unit	3.63	--	3.14	--	2.86	--	-0.49	-13.5	-0.28	-8.9

Kewaskum Planning Area

Characteristics	1970		1980		1990		Change: 1970-1980		Change: 1980-1990	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent	Number	Percent
Population										
Household	3,087	99.8	3,606	99.5	3,649	99.9	519	16.8	43	1.2
Group Quarters	5	0.2	18	0.5	4	0.1	13	260.0	-14	-77.8
Total	3,092	100.0	3,624	100.0	3,653	100.0	532	17.2	29	0.8
Housing Unit Type										
Owner-Occupied	664	73.2	879	74.9	899	68.7	215	32.4	20	2.3
Renter-Occupied	220	24.3	284	23.3	382	29.1	54	24.5	108	39.4
Vacant for Sale	2	0.2	4	0.3	0	0.0	2	100.0	-4	-100.0
Vacant for Rent	3	0.3	10	0.9	10	0.8	7	233.3	0	0.0
Other Vacant[b]	18	2.0	7	0.6	18	1.4	-11	-61.1	11	157.1
Total	907	100.0	1,174	100.0	1,309	100.0	267	29.4	135	11.5
Persons per Occupied Housing Unit	3.49	--	3.13	--	2.85	--	-0.36	-10.3	-0.28	-8.9

Table 4 (continued)

Village of Kewaskum										
	1970		1980		1990		Change: 1970-1980		Change: 1980-1990	
Characteristics	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent	Number	Percent
Population										
Household	1,921	99.7	2,363	99.2	2,512	99.9	442	23.0	149	6.3
Group Quarters	5	0.3	18	0.8	2	0.1	13	260.0	-16	-88.9
Total	1,926	100.0	2,381	100.0	2,514	100.0	455	23.6	133	5.6
Housing Unit Type										
Owner-Occupied	409	69.8	575	71.7	612	64.9	166	40.6	37	6.4
Renter-Occupied	162	27.6	212	26.4	313	33.2	50	30.9	101	47.6
Vacant for Sale	2	0.4	3	0.4	0	0.0	1	50.0	-3	-100.0
Vacant for Rent	3	0.5	8	1.0	5	0.5	5	166.7	-3	-37.5
Other Vacant[b]	10	1.7	4	0.5	13	1.4	-6	-60.0	9	225.0
Total	586	100.0	802	100.0	943	100.0	216	36.9	141	17.6
Persons per Occupied Housing Unit	3.36	--	3.00	--	2.72	--	-0.36	-10.7	-0.28	-19.3

[a]*The total population for the Region in 1970 and in 1980 was revised by the U. S. Bureau of the Census to 1,756,083 and 1,767,796, respectively. However, attribute data regarding the number of persons in households and group quarters were not revised.*

[b]*Includes migratory and seasonal housing units.*

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

Table 5

COMPARISON OF HISTORIC AND PROBABLE FUTURE HOUSEHOLD SIZE IN THE SOUTHEASTERN WISCONSIN REGION, WASHINGTON COUNTY, THE KEWASKUM PLANNING AREA, AND THE VILLAGE OF KEWASKUM URBAN SERVICE AREA: 1970-2010

Year	Region	Washington County	Kewaskum Planning Area	Village of Kewaskum Urban Service Area
1970	3.20	3.63	3.49	3.36[a]
1980	2.75	3.14	3.13	3.00[a]
1990	2.62	2.86	2.85	2.72[a]
2010[b]				
Low-Growth Decentralized	2.20	2.40	2.30	2.20
Intermediate-Growth Centralized	2.40	2.60	2.50	2.40
Intermediate-Growth Decentralized	2.40	2.60	2.50	2.40
High-Growth Centralized	2.60	2.90	2.80	2.70
High-Growth Decentralized	2.70	2.90	2.80	2.70

[a]*Data are based on the Village of Kewaskum corporate limits.*

[b]*Forecast data were prepared using 1980 base data and may not reflect changes in household size which occurred between 1980 and 1990.*

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

household sizes in the Southeastern Wisconsin Region, Washington County, the Kewaskum planning area, and the Village of Kewaskum urban service area. Forecast variations in household size are generally due to a greater assumed proportion of "traditional" household, consisting of husband, wife, and children, under the high-growth scenario and a greater proportion of single-parent families and single-person households under the low-growth scenario, with more children per family in the "traditional" families.

Table 5 indicates that in 1990 the average household size in the Village of Kewaskum was 2.72, compared to 2.85 in the Kewaskum planning area, 2.86 in Washington County, and 2.62 in the Region. This table also indicates that under the intermediate-growth decentralized forecast, the future scenario selected for use in the preparation of the land use and street system plans, the average household size may be expected to decline for all the areas considered, with household size in the Kewaskum urban service area decreasing from 2.72 persons per household in 1990 to 2.40 in 2010. This is in keeping with the trend exhibited from 1970 to 1990. On the basis of the selected forecast population of about 4,060 persons and average household size of 2.40 persons, a total of about 1,692 occupied housing units may be expected to be needed in the urban service area in the year 2010. This represents an increase of about 749 housing units above the 1990 total of 943 units, or an average increase of about 36 units each year.

Housing Construction Activity 1981 to 1992

Table 6 provides a summary of residential building permits issued in the Village of Kewaskum from 1981 to 1992. During this 12-year period, permits for 262 housing units were issued, of which 37 units, or about 14 percent, were for single-family housing units and the remaining 225 units, or 86 percent, were for multi-family housing units. No permits were issued for two-family housing units during this period. The table indicates that since 1981 multi-family housing units have been constructed at a higher rate than single-family housing units. From 1981 through 1992, an average of about 22 residential building permits were issued per year. From 1987 through 1992, an average of about 35 permits were issued each year.

Housing Types

The 1990 census determined that there were 943 housing units in the Village of Kewaskum. Of this total, 641, or about 68 percent, were single-family detached units; 99, or about 10 percent, were two-family units; and 195, or about 21 percent, were multi-family units. The Census also identified four single-family attached housing units and four housing units classified as "other."

Table 6

RESIDENTIAL BUILDING ACTIVITY IN THE VILLAGE OF KEWASKUM: 1981-1992[a]

Year	Single-Family Housing Units	Multi-Family Housing Units	Total Housing Units
1981	2	37	39
1982	3	0	3
1983	2	4	6
1984	2	0	2
1985	0	0	0
1986	3	0	3
1987	0	20	20
1988	5	16	21
1989	6	77	83
1990	3	16	19
1991	2	0	2
1992	9	55	64
Total	37	255	262
Average Annual	3	21	22

[a]No building permits were issued for two-family housing units during this period.

Source: Village of Kewaskum and SEWRPC.

Housing Occupancy and Vacancy Rates

Housing vacancy rates for "owner-occupied" and rental housing in 1990 for Southeastern Wisconsin, Washington County, and the Village of Kewaskum are shown in Table 7. There were no vacant owner-occupied housing units, that is, formerly owner-occupied housing units that were vacant and up for sale, in the Village in 1990. The vacancy rate for rental units, however, was about 2 percent of the total 315 rental units in the Village in 1990.

Standards contained in SEWRPC Planning Report No. 20, A Regional Housing Plan for Southeastern Wisconsin, February 1975, suggest that local housing vacancy rates be maintained between 4 percent and 6 percent for rental units and between 1 percent and of 2 percent for owner-occupied units over a full range of housing types, sizes, and costs. These vacancy rates are desirable to facilitate population mobility and to enable households to

Table 7

VACANCY RATES FOR OWNER- AND RENTER-OCCUPIED HOUSING UNITS IN THE SOUTHEASTERN WISCONSIN REGION, WASHINGTON COUNTY, THE KEWASKUM PLANNING AREA, AND THE VILLAGE OF KEWASKUM: 1990

Housing Unit Type	Region		Washington County		Kewaskum Planning Area		Village of Kewaskum	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Owner Occupied	414,049	99.1	24,383	99.5	899	100.0	612	100.0
Vacant for Sale	3,830	0.9	125	0.5	0	0.0	0	0.0
Total	417,879	100.0	24,508	100.0	899	100.0	612	100.0
Renter Occupied	262,058	95.4	8,594	97.3	382	97.4	313	98.4
Vacant for Rent	12,615	4.6	241	2.7	10	2.6	5	1.6
Total	274,673	100.0	8,835	100.0	392	100.0	318	100.0

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

exercise choices in the selection of suitable housing. The Village's 1990 vacancy rate for both "owner-occupied" and rental housing units were well below these recommended standards. It may accordingly be concluded that in 1990 the Village of Kewaskum was in need of both additional owner-occupied and rental housing units.

ECONOMIC CHARACTERISTICS AND FORECASTS

Household Income

Table 8 indicates household income in 1989 for Southeastern Wisconsin, Washington County, the Kewaskum planning area, and the Village of Kewaskum by income ranges, together with the median and average income levels for each of the geographic areas listed. The median household income in the Village of Kewaskum was higher than that of the Region, but lower than those for both Washington County and the Kewaskum planning area. The average household income in 1989 in the Village of Kewaskum was lower than those in the Region, Washington County, and the Kewaskum planning area. The forecast 2010 median income under the three future growth scenarios are also expected to furnish the same results; that is, the median income of the Village is expected to be higher than that of the Region but lower than those for Washington County and the Kewaskum planning area. The forecast average income under each of the future growth scenarios for the Village of Kewaskum is expected to be somewhat lower than those for the Region, Washington County, and the Kewaskum planning area in the year 2010. Under the intermediate-growth scenario, selected for plan preparation, the median 1989 household income of $33,306 for the Village of Kewaskum is forecast to increase to $40,640, or by about 22 percent, and the average household income of $35,033 is forecast to increase to $42,750, or also by about 22 percent, all expressed in constant 1989 dollars.

Place of Work

Table 9 indicates the general place of work of employed population 16 years and older living in Washington County and in the Village of Kewaskum in 1990. This table indicates that 1,095 workers living in the Village of Kewaskum, or about 83 percent of the employed labor force, worked in Washington County; while 222 workers, or about 17 percent, worked outside Washington County. The table further indicates that about 141 workers living in the Village, or about 11 percent of the employed labor force, worked in the Village of Kewaskum; while 1,176 workers, or about 89 percent, worked outside the Village. Table 9 thus indicates that a substantial number of workers living in the Village of Kewaskum or in Washington County were employed outside their community or county of residence.

Employment Forecasts and Types

Table 10 sets forth the forecasts employment levels for the Village of Kewaskum urban service area to

Table 8

ACTUAL AND PROJECTED HOUSEHOLD INCOME IN THE SOUTHEASTERN WISCONSIN REGION, WASHINGTON COUNTY, THE KEWASKUM PLANNING AREA, AND THE VILLAGE OF KEWASKUM URBAN SERVICE AREA: 1989 AND 2010

Household Income Range (1989 dollars)	Region		Washington County		Kewaskum Planning Area		Village of Kewaskum Urban Service Area[a]	
	Number of Households	Percent of Total	Number of Households	Percent of Total	Number of Households	Percent of Total	Number of Households	Percent of Total
1989[b]								
Less than $5,000	24,879	3.7	442	1.4	15	1.0	10	1.0
$5,000 to $9,999	63,191	9.3	1,650	5.0	122	9.3	100	10.6
$10,000 to $12,499	29,465	4.4	961	2.9	63	4.8	49	5.2
$12,500 to $14,999	26,147	3.9	993	3.0	52	4.0	35	3.7
$15,000 to $17,499	29,003	4.3	1,132	3.4	47	3.6	37	3.9
$17,500 to $19,999	27,707	4.1	997	3.0	42	3.2	27	2.9
$20,000 to $22,499	30,503	4.5	1,345	4.1	48	3.7	34	3.6
$22,500 to $24,999	26,473	3.9	1,219	3.7	64	4.9	48	5.1
$25,000 to $27,499	30,020	4.4	1,448	4.4	79	6.0	52	5.5
$27,500 to $29,999	24,880	3.7	1,228	3.7	43	3.3	33	3.5
$30,000 to $34,999	54,445	8.1	2,942	9.0	104	7.9	79	8.3
$35,000 to $39,999	50,990	7.5	2,981	9.1	86	6.5	56	5.9
$40,000 to $49,999	89,594	13.2	5,850	17.8	258	19.6	192	20.3
$50,000 to 74,999	114,418	16.9	6,929	21.1	223	17.0	168	17.7
$75,000 or More	54,878	8.1	2,770	8.4	68	5.2	27	2.8
Total	676,593	100.0	32,887	100.0	1,314	100.0	947	100.0
1989[b]								
Median Income	$30,783	--	$38,431	--	$38,796	--	$33,306	--
Average Income	38,541	--	42,483	--	42,259	--	35,033	--
2010[c]								
Low-Growth Scenario[d]								
Median Income	$34,010	--	$42,460	--	$42,870	--	$36,800	--
Average Income	42,580	--	46,940	--	46,690	--	38,710	--
Intermediate-Growth Scenario[e]								
Median Income	$37,560	--	$46,890	--	$47,340	--	$40,640	--
Average Income	47,030	--	51,840	--	51,560	--	42,750	--
High-Growth Scenario[f]								
Median Income	$45,740	--	$57,110	--	$57,650	--	$49,490	--
Average Income	57,270	--	63,130	--	62,790	--	52,060	--

[a] *1989 data are based on the Village of Kewaskum corporate limits.*

[b] *Data reported in 1990 Census of Population and Housing actually represents calendar year 1989.*

[c] *Data are expressed in 1989 dollars.*

[d] *Assumes annual increase of 0.5 percent.*

[e] *Assumes annual increase of 1.0 percent.*

[f] *Assumes annual increase of 2.0 percent.*

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

the year 2010 under the range of future scenarios for the six major employment categories: retail trade; service; industrial; governmental, institutional, and educational; transportation, communication, and utilities; and agricultural. Figure 3 shows the overall total forecast employment levels for the Village of Kewaskum urban service area under the five future scenarios. The six major employment categories may be related to specific land use requirements, and are, therefore, useful when calcu-

Table 9

PLACE OF WORK OF EMPLOYED POPULATION 16 YEARS AND OLDER LIVING IN WASHINGTON COUNTY AND THE VILLAGE OF KEWASKUM: 1990

Place of Work	Washington County		Village of Kewaskum	
	Number of Workers	Percent of Total	Number of Workers	Percent of Total
Worked inside County of Residence	27,068	54.4	1,095	83.1
Worked outside County of Residence	22,704	45.6	222	16.9
Total	49,772	100.0	1,317	100.0
Worked inside Community of Residence	10,801	38.6	141	10.7
Worked outside Community of Residence	17,173	61.4	1,176	89.3
Total	27,974[a]	100.0	1,317	100.0

[a]*Excludes 21,798 workers not living in an identified community (i.e. living in a rural area) as identified by the U. S. Bureau of the Census.*

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

lating the amount of land needed for each category in the year 2010. Employment in the Kewaskum urban service area may be expected to increase from about 1,540 jobs in 1990 to about 2,290 jobs, or about 49 percent, by the year 2010 under the intermediate-growth decentralized scenario, which is the selected forecast for plan preparation purposes. This represents an increase of about 750 jobs, including an increase of 80 service jobs; 650 industrial jobs; 10 governmental, institutional, and educational jobs; and 20 jobs in transportation, communications, and utilities. Retail trade employment is expected to decrease by about 10 jobs; agricultural jobs are expected to remain the same in the urban service area between 1990 and 2010 under the selected future scenario.

Table 10

ESTIMATED AND FORECAST EMPLOYMENT LEVELS BY TYPE IN THE VILLAGE OF KEWASKUM URBAN SERVICE AREA: 1980, 1990, AND 2010

Employment Type	1980 Estimated	1990 Estimated	Alternative 2010 Forecasts[a]				
			Low-Growth	Intermediate-Growth		High-Growth	
			Decentralized	Centralized	Decentralized	Centralized	Decentralized
Retail Trade[b]	160	170	80	150	160	160	240
Service[c]	150	210	170	230	290	290	430
Industrial[d]	1,100	830	1,320	1,340	1,480	1,560	1,650
Governmental, Institutional, and Educational	180	250	220	250	260	280	380
Transportation, Communication, and Utilities[e]	30	70	70	90	90	100	100
Agricultural[f]	10	10	10	10	10	10	20
Total	1,630	1,540	1,870	2,070	2,290	2,400	2,820

[a] *Forecast data were prepared using 1980 base data and may not reflect changes in employment which occurred between 1980 and 1990.*

[b] *Includes grocery, drug, variety, clothing, and other retail store workers.*

[c] *Includes self-employed persons; workers in finance, insurance, and real estate; hotel and motel workers; day-care workers; barbers and hairdressers; and other service workers.*

[d] *Includes manufacturing, construction, and wholesale trade workers.*

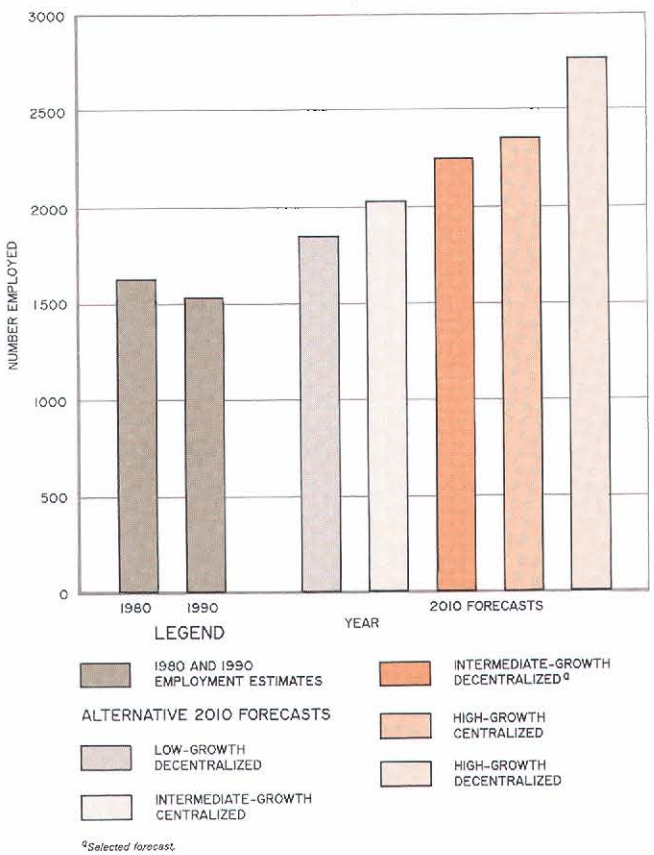
[e] *Includes utility company workers; postal workers; and bus, trucking, and railroad workers.*

[f] *Includes farmers, miners, forestry workers; and landscaping and nursery workers.*

Source: U. S. Bureau of Economic Analysis; Wisconsin Department of Industry, Labor and Human Relations; and SEWRPC.

Figure 3

ESTIMATED AND ALTERNATIVE FORECAST EMPLOYMENT LEVELS FOR THE VILLAGE OF KEWASKUM URBAN SERVICE AREA: 1980, 1990, AND 2010



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

Chapter III

NATURAL RESOURCE BASE INVENTORY AND ANALYSIS

The conservation and wise use of the natural resource base is vital to the physical, social, and economic development of any area and to the continued ability of that area to provide a pleasant and habitable environment for life. Given the anticipated population and employment growth envisioned for the Kewaskum planning area, land use development may be expected to subject the natural resource base of the area to substantial deterioration and destruction in the absence of sound planning and plan implementation. Consequently, a sound development plan for the planning area should identify areas with concentrations of natural resources deserving of protection from intensive urban development for ecological reasons and also areas with natural resource characteristics which may impose severe limitations on urban development.

For the purposes of this planning program, the principal elements of the natural resource base requiring consideration in the land use planning process were identified as 1) physiography and associated topographic and soil characteristics, 2) water resources, including watershed boundaries, rivers, streams, and associated floodlands and wetlands, and 3) woodlands. Elements closely related to the natural resource base and considered in the planning process include park and open space sites, scenic overlooks, natural areas of scientific value, prime agricultural lands, and climate.

Areas of the landscape containing concentrations of high-value elements of the natural resource base have been identified and termed "environmental corridors" by the Regional Planning Commission. The environmental corridors presented herein encompass those areas of Southeastern Wisconsin in which concentrations of recreational, aesthetic, ecological, and cultural resources occur, and which, therefore, should be preserved and protected in an essentially open, natural state.

Without a proper understanding of the significance of the natural resource base, human alteration of the natural environment proceeds at the risk of excessive costs in terms of both monetary expenditures and environmental degradation. The natural resource base is highly vulnerable to misuse through improper land use development. Such misuse may lead to severe environmental problems which are difficult and costly to correct and to the deterioration and destruction of the natural resource base itself. Intelligent selection of the most desirable urban development pattern from among the alternatives available must, therefore, be based in part upon a careful assessment of the effect of each alternative upon the natural resource base. The following discussion summarizes the inventory findings in this respect.

PHYSIOGRAPHIC AND TOPOGRAPHIC FEATURES

Glaciation has largely determined the physiography and topography of Southeastern Wisconsin, including the Kewaskum planning area. The dominant physiographic feature, or surficial landform, of Southeastern Wisconsin is the Kettle Moraine, an interlobate glacial deposit, or moraine, formed between the Green Bay and Lake Michigan lobes of the continental glacier which moved in a generally southerly direction from its origin in what is now Canada. The Kettle Moraine, which is oriented in a general northeast-southwest direction across western Washington, Waukesha, and Walworth Counties, is a complex system of kames, or crudely stratified conical hills; kettle holes, marking the site of glacial ice blocks that became separated from the ice mass and melted to form depressions; and eskers, long, narrow ridges of drift deposited in abandoned drainageways. Most of the remainder of Washington County is covered by other glacial landforms and features, including gently sloping and rolling ground moraines, consisting of heterogeneous material deposited beneath the ice; outwash plains, formed by the action of flowing glacial meltwater; and glacial lake basin deposits.

The configuration of the bedrock geology, together with the overlying glacial deposits, establishes the topography, or relative elevation of the land surface, within the Kewaskum planning area. Surface elevations within the Kewaskum planning area range from a low of about 920 feet above mean sea level, in the south-central part of the planning area along the Milwaukee River, to a high of more than 1,170 feet above mean sea level, at the Sunburst Ski Area, also in the south-central part of the planning area.

In general, the topography of the planning area is level to gently rolling, with the low-lying areas associated with the streams or wetlands.

Slope is an important determinant of land use practicability on a given parcel of land. Lands with steep slopes are generally poorly suited for urban development as well an agricultural purposes; thus they should be maintained in natural cover for erosion control. Lands with less severe slopes may be suitable for certain agricultural uses, such as pasture, and for certain urban uses, such as carefully designed low-density residential uses. Lands which are gently sloping or nearly level are best suited to agricultural production and to medium- and high-density residential and industrial or commercial uses. It should also be noted that slope is directly related to water runoff and erosion hazards and, therefore, the type and extent of both urban and rural land uses should be carefully adjusted to the slope of the land. In general, slopes of 12 percent or more should be considered unsuitable for urban development and most types of agricultural land uses and, therefore, should be maintained in essentially natural, open uses. Urban development, if allowed on such slopes, would require careful planning and above-average site-specific design and management. Most slopes of 12 percent or greater are found in the eastern half of the planning area.

SOILS

Soil properties exert a strong influence on the manner in which people use land. Soils are an irreplaceable resource; mounting pressures upon land are constantly making this resource more and more valuable. A need exists in any planning effort, therefore, to examine not only how land and soils are currently used, but also how they can best be used and managed for future use. This requires a detailed soil survey, which maps the geographic locations of various types of soils; identifies their physical, chemical, and biological properties; and interprets these properties for land use and public facilities planning.

A soil survey of the Southeastern Wisconsin Region was completed in 1965 by the U. S. Department of Agriculture, Soil Conservation Service, under contract to the Regional Planning Commission. The findings of the survey are set forth in SEWRPC Planning Report No. 8, Soils of Southeastern Wisconsin, June 1966, and in five county reports subsequently published by Soil Conservation Service. Soil survey information for the Kewaskum planning is included in the Soil Survey of Washington County, published in June 1971.

The information on soils is of particular importance to the preparation of a development plan for the Kewaskum planning area. The soils data are essential to the proper analysis of existing land use patterns, alternative plan design and evaluation, and plan selection. The soil assessments are used in conjunction with other data in the design of desirable spatial patterns for various residential, commercial, industrial, agricultural, and recreational land uses and in the evaluation of alternative locations for various kinds of public works. Interpretive maps showing the limitations of the soils of the planning area for selected uses were prepared for use in the planning effort.

Soil Suitability for Onsite Sewage Disposal Systems

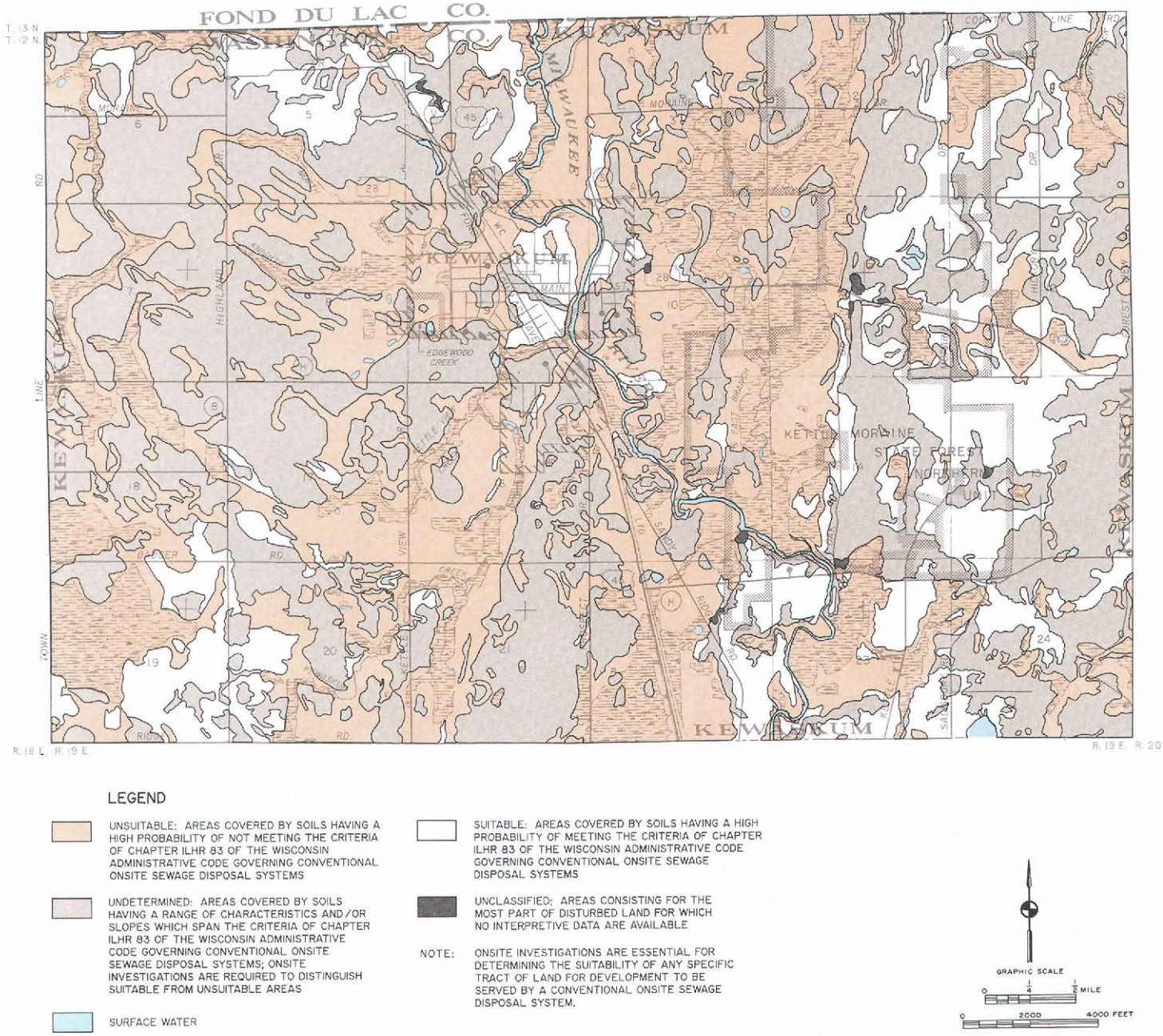
Interpretations of the properties and attendant limitations of the various soils for specific types of urban land uses are an important consideration in any land use planning effort. Among the more important types of land uses to be considered in this respect are residential development with public sanitary sewer service and residential development with onsite sewage-disposal systems. The most significant soil properties relating to these land uses are depth to bedrock, depth to the water table, permeability, presence of coarse-textured sand and gravel, flooding hazard, and slope. All these characteristics are important considerations in the development of an area for urban use, particularly for residential use utilizing onsite sewage-disposal systems.

In 1965, at the time the regional soil survey was conducted, disposal of domestic sewage was primarily based on use of the conventional septic tank system. Since that time, alternative onsite sewage-disposal systems have been designed, field tested, and, in some cases, approved by regulatory agencies for use under more limiting soil conditions than those for which conventional systems would be acceptable. Chapter ILHR 83 of the Wisconsin Administrative Code, which governs the siting and design of onsite sewage-disposal systems, was also adopted subsequent to the completion of the detailed regional soil survey.

As part of the year 2010 regional land use planning effort, the Regional Planning Commission reviewed and, as necessary, revised the soil interpretations developed under the 1965 soil survey to reflect current technology and regulatory practice. Soil

Map 3

SUITABILITY OF SOILS FOR CONVENTIONAL ONSITE SEWAGE-DISPOSAL SYSTEMS IN THE KEWASKUM PLANNING AREA



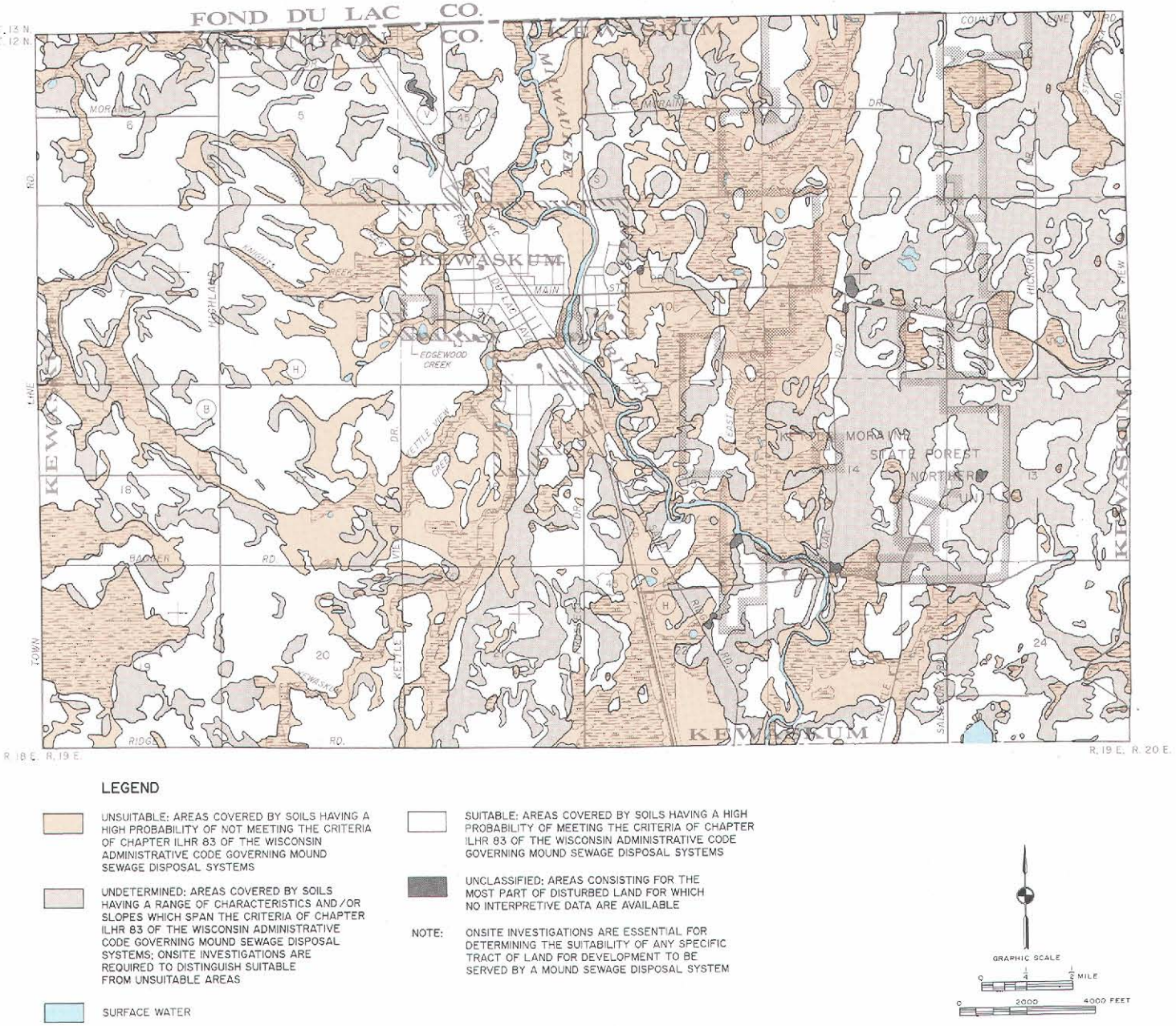
Source: Wisconsin Department of Industry, Labor and Human Relations; U. S. Natural Resources Conservation Service; and SEWRPC.

classifications were developed to reflect suitability for conventional onsite sewage-disposal systems and the most common alternative onsite sewage-disposal system, the mound system, in accordance with the soil and site specifications set forth in Chapter ILHR 83. The revised classifications were based on soil characteristics indicated in the detailed soil surveys as well as the actual field experience of County and State technicians responsible for overseeing the location and design of such systems.

Maps 3 and 4 show the suitability of soils in the planning area for onsite sewage-disposal systems on the basis of State requirements. Specifically,

Map 4

SUITABILITY OF SOILS FOR MOUND SEWAGE-DISPOSAL SYSTEMS IN THE KEWASKUM PLANNING AREA



LEGEND

- UNSUITABLE: AREAS COVERED BY SOILS HAVING A HIGH PROBABILITY OF NOT MEETING THE CRITERIA OF CHAPTER ILHR 83 OF THE WISCONSIN ADMINISTRATIVE CODE GOVERNING MOUND SEWAGE DISPOSAL SYSTEMS
- UNDETERMINED: AREAS COVERED BY SOILS HAVING A RANGE OF CHARACTERISTICS AND/OR SLOPES WHICH SPAN THE CRITERIA OF CHAPTER ILHR 83 OF THE WISCONSIN ADMINISTRATIVE CODE GOVERNING MOUND SEWAGE DISPOSAL SYSTEMS; ONSITE INVESTIGATIONS ARE REQUIRED TO DISTINGUISH SUITABLE FROM UNSUITABLE AREAS
- SURFACE WATER
- SUITABLE: AREAS COVERED BY SOILS HAVING A HIGH PROBABILITY OF MEETING THE CRITERIA OF CHAPTER ILHR 83 OF THE WISCONSIN ADMINISTRATIVE CODE GOVERNING MOUND SEWAGE DISPOSAL SYSTEMS
- UNCLASSIFIED: AREAS CONSISTING FOR THE MOST PART OF DISTURBED LAND FOR WHICH NO INTERPRETIVE DATA ARE AVAILABLE

NOTE: ONSITE INVESTIGATIONS ARE ESSENTIAL FOR DETERMINING THE SUITABILITY OF ANY SPECIFIC TRACT OF LAND FOR DEVELOPMENT TO BE SERVED BY A MOUND SEWAGE DISPOSAL SYSTEM

GRAPHIC SCALE
0 1/4 1/2 MILE
0 2000 4000 FEET

Source: Wisconsin Department of Industry, Labor and Human Relations; U. S. Natural Resources Conservation Service; and SEWRPC.

Map 3 shows the suitability of soils in the planning area for conventional onsite systems, while Map 4 shows the suitability of soils in the planning area for mound systems. Areas shown as "suitable" on Maps 3 and 4 depict areas covered by soils that have a high probability of meeting State requirements for onsite systems. Areas shown as "unsuitable" depict areas covered by soils that have a high probability of not meeting these requirements. Areas shown as "undetermined" include soils that span the range from unsuitable to suitable for characteristics that affect the operation of onsite systems, so that no classification can be assigned. For example, such soils may exhibit a wide range of slopes or a wide

Table 11

SOIL SUITABILITY FOR SELECTED LAND USES IN THE KEWASKUM PLANNING AREA

Classification	Onsite Sewage Disposal Systems				Residential Developments with Public Sanitary Sewer		Small Commercial Buildings[a]	
	Conventional Systems		Mound Systems					
	Acres	Percent of Total	Acres	Percent of Total	Acres	Percent of Total	Acres	Percent of Total
Unsuitable	6,351.4	40.8	4,366.1	28.0	6,684.2	42.9	10,181.6	65.3
Undetermined	6,304.1	40.4	3,919.0	25.2	--	--	--	--
Suitable	2,785.3	17.9	7,155.7	45.9	8,756.6[b]	56.2	5,259.2[b]	33.8
Other[c]	139.4	0.9	139.4	0.9	139.4	0.9	139.4	0.9
Total	15,580.2	100.0	15,580.2	100.0	15,580.2	100.0	15,580.2	100.0

[a] *Buildings of three stories or less, with no basements.*

[b] *Soils having slight or moderate limitations for such developments.*

[c] *Includes surface water areas and disturbed areas for which no soil survey data are available.*

Source: SEWRPC.

range of percolation rates. Onsite investigation is required to determine the suitability of "undetermined" areas. Areas shown as "unclassified" are disturbed areas, such as quarries and gravel pits, for which no interpretive data are available.

Map 3 and Table 11 indicate that about 6,400 acres, or about 41 percent of the planning area, are covered by soils that are unsuitable for the use of conventional onsite sewage-disposal systems. These soils are located throughout the planning area, but primarily in association with rivers, streams, floodlands, wetlands, and other low-lying areas. Areas covered by soils suitable for conventional onsite systems, also shown on Map 3, encompass about 2,800 acres, or about 18 percent of the planning area. Suitable areas include much of the developed portion of the Village and upland areas in the remainder of the planning area. About 6,300 acres, or about 40 percent of the planning area, are covered by soils whose suitability or unsuitability for conventional onsite systems cannot be determined without onsite investigation. About 140 acres, or about 1 percent of the planning area, are covered either by surface water or by soils that have not been classified.

The technology and practices of onsite sewage-disposal continue to change rapidly. As previously noted, mound sewage-disposal systems have, in some cases, been approved for use under more limiting soil conditions than those for conventional systems. For example, mound systems may be feasible in areas with shallow bedrock or high water tables which would preclude the use of conventional systems. These alternative systems include shallow in-ground, at-grade, and mound soil-absorption systems. Mound systems are similar to conventional septic tank systems in that they consist of a septic tank and a soil-absorption field; however, mound systems are constructed above the surface of the ground and covered with soil, while conventional systems are located beneath the surface of the ground. In addition, a conventional septic tank system distributes sewage through the absorption field by gravity, while a mound system uses a pump to purge the absorption field two or three times per day. Shallow in-ground systems or at-grade systems distribute sewage by either gravity or pressure, with dosing pump systems preferred.

The general pattern of soil suitability for mound sewage-disposal systems is shown on Map 4 and quantified in Table 11. Approximately 4,400 acres, or about 28 percent of the planning area, are covered by soils unsuitable for mound systems, compared to about 41 percent of the planning area covered by soils unsuitable for conventional systems. Soils shown on Map 4 as suitable for mound systems encompass approximately 7,200 acres, or about 46 percent of the planning area, while only 18 percent of the planning area is classified as

suitable for conventional systems. About 3,900 acres, or about 25 percent of the planning area, are covered by soils whose suitability or unsuitability for mound systems cannot be determined without onsite investigation.

It should be recognized that Maps 3 and 4 are intended to illustrate the overall pattern of soil suitability for onsite systems. Detailed site investigations based on the requirements of Chapter ILHR 83 are necessary to determine if the soils on a specific tract of land are suitable for development with onsite sewage-disposal systems. In general, areas covered by soils that are unsuitable for both conventional and mound systems should not be considered for urban development unless public sanitary sewers are provided.

Soil Suitability for Residential and Commercial Developments

Map 5 shows the areas covered by soils with slight, moderate, or severe limitations for residential development served by public sanitary sewer facilities. Map 6 shows the areas covered by soils with slight, moderate, or severe limitations for small commercial buildings of less than three stories without basements. In both cases, the severe limitations are due to such soil properties as a high water table, slow permeability rates, erodibility on slopes, low bearing capacity, high shrink-swell potential, and frost-heave potential. These soils are found throughout the planning area, but primarily in steeply sloped areas and in association with rivers, streams, floodlands, wetlands, and other low-lying areas. The development of these areas for residential or commercial uses requires particularly careful planning and above-average design and management to overcome the limitations; such development may be expected to be more costly and difficult than development in areas with more suitable soils.

Map 5 and Table 11 indicate that about 6,700 acres, or about 43 percent of the planning area, are covered by soils that have severe limitations for residential development served by public sanitary sewer facilities. Soils shown on Map 5 as having slight or moderate limitations for such development encompass approximately 8,800 acres, or about 56 percent of the planning area. Map 6 and Table 11 indicate that about 10,200 acres, or about 65 percent of the planning area, are covered by soils with severe limitations for small commercial buildings; approximately 5,300 acres, or about 34 percent of the planning area, are covered by soils with slight or moderate limitations for small commercial buildings. The remaining soils portrayed on both maps, encompassing about 140 acres, or about 1 percent of the planning area, are covered by surface water or by soils that have not been classified.

WATER RESOURCES

Watershed, Subwatersheds, and Subbasins

The surface drainage system of the Kewaskum planning area lies entirely within the Milwaukee River watershed, which is a part of the Great Lakes-St. Lawrence River drainage system. The portion of the Milwaukee River watershed in the planning area can be divided into ten subwatersheds, as shown on Map 7, including the North Creek; the Kewaskum Creek; the Knights Creek; the Kettle View Creek; the Stony Creek; and the North Branch, West Branch, East Branch, Middle, and Upper Milwaukee River subwatersheds. For stormwater management planning purposes, all the subwatersheds may be further subdivided into individual drainage areas, termed subbasins, also shown on Map 7.

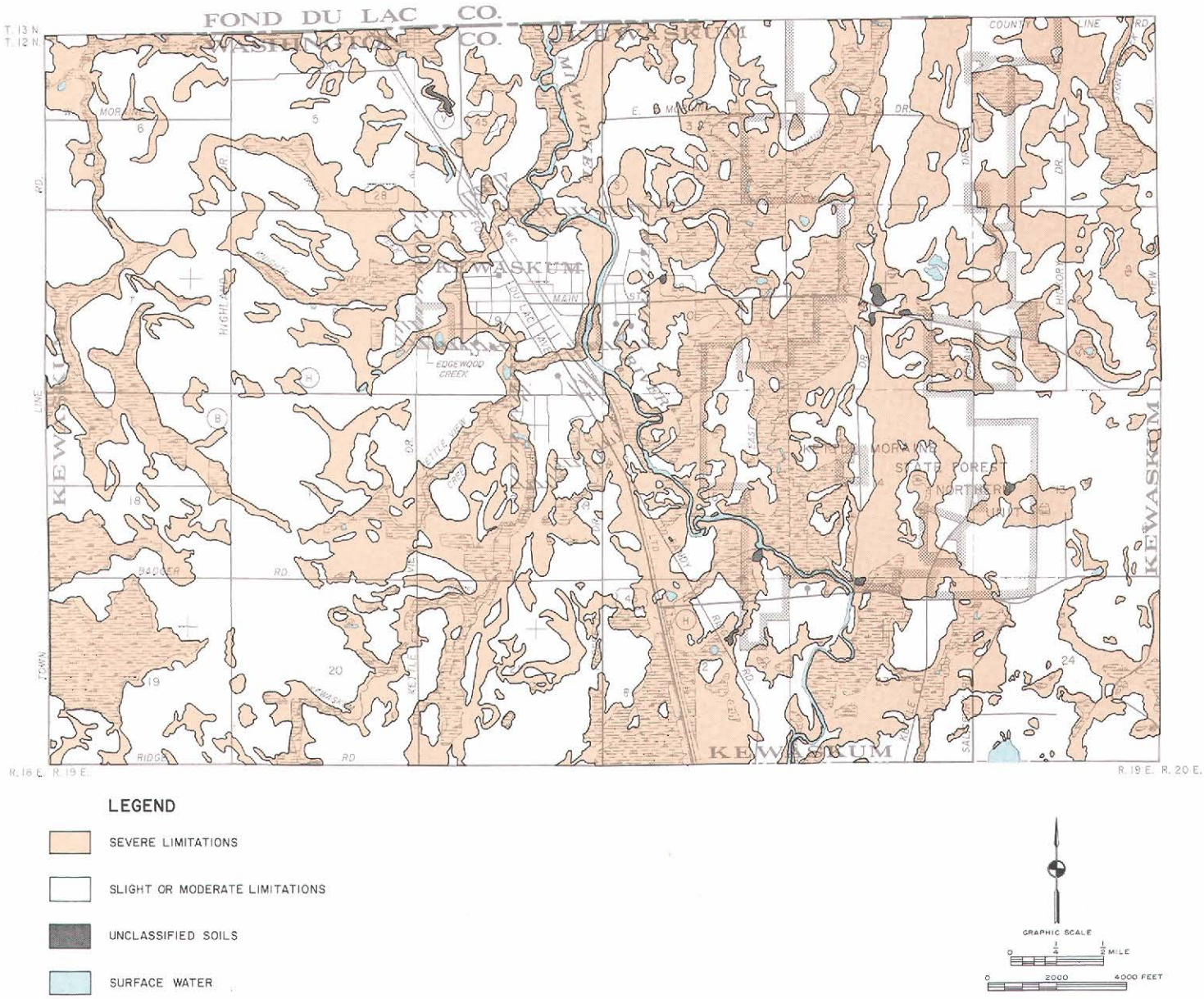
Surface Water Resources

Surface water resources, consisting of rivers, streams, lakes, and associated floodlands and wetlands, form a particularly important element of the natural resource base of the Kewaskum area. Surface water resources influence the physical development of an area, provide recreational opportunities, and enhance the aesthetic quality of the area. Lakes and streams constitute a focal point for water-related recreational activities, provide an attractive setting for properly planned residential development, and, when viewed in the context of the total landscape, greatly enhance the aesthetic quality of the environment.

Lakes and streams are readily susceptible to degradation through improper land use and management. Water quality can be degraded by excessive pollutant loads, including nutrient loads; from malfunctioning and improperly located onsite sewage-disposal systems; from sanitary sewer overflows; and from urban runoff, including runoff from construction sites; and from careless agricultural practices. The water quality of lakes and streams may also be adversely affected by the excessive development of riverine areas and the filling of peripheral wetlands, which destroy valuable nutrient and sediment traps while adding to nutrient and sediment sources. The surface water resources in the Kewaskum planning area are shown on Map 7.

Map 5

SUITABILITY OF SOILS FOR RESIDENTIAL DEVELOPMENT WITH PUBLIC SANITARY SEWER SERVICE IN THE KEWASKUM PLANNING AREA

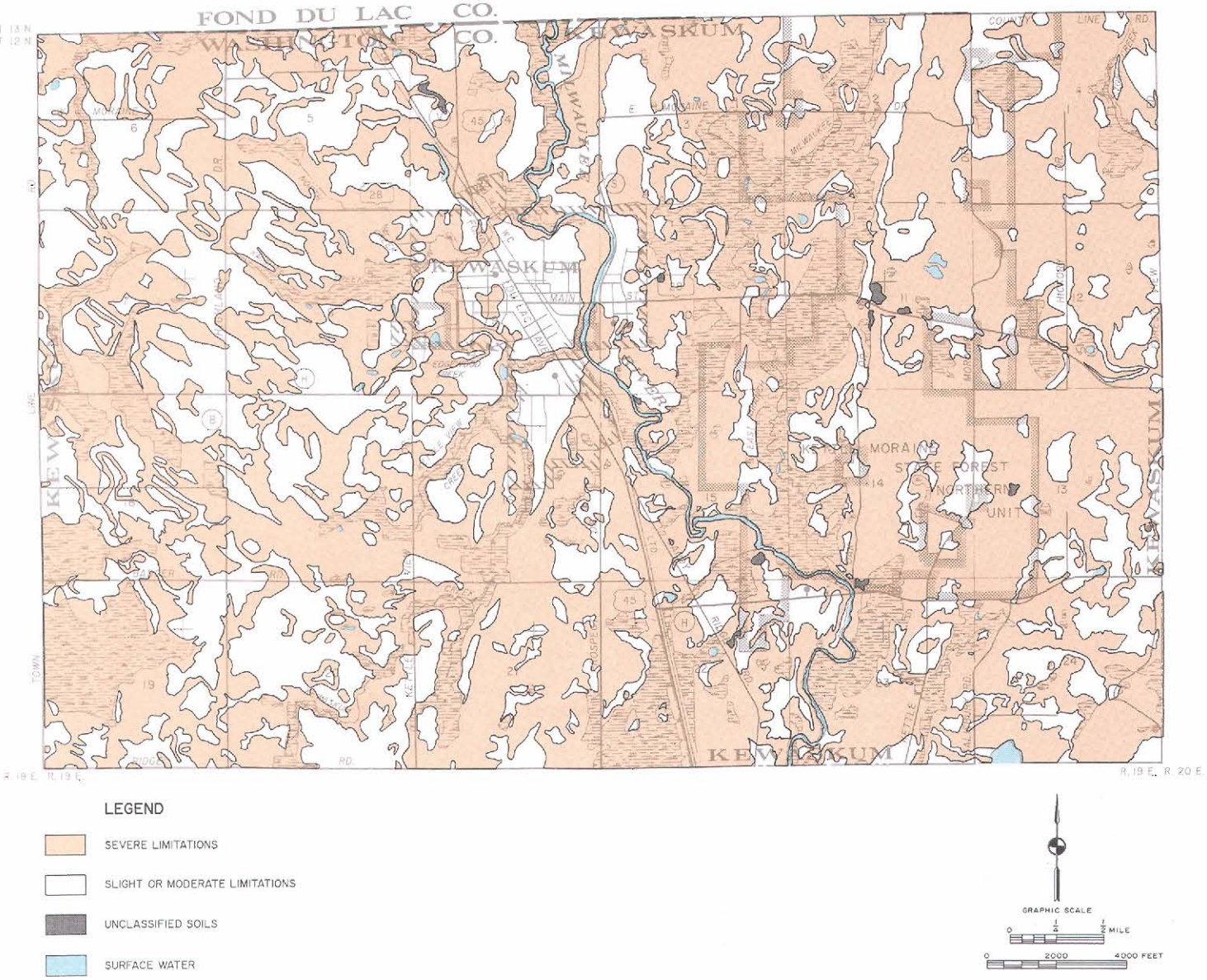


Source: U. S. Natural Resources Conservation Service and SEWRPC.

Lakes, Rivers, and Streams: Only a part of a 17-acre, unnamed lake is located within the Kewaskum planning area. Several significant streams, however, flow through the planning area. These watercourses may be classified as perennial or intermittent, as indicated on Map 7. Perennial streams are defined as watercourses which maintain, at a minimum, a small continuous flow throughout the year except under unusual drought conditions. Intermittent streams are defined as watercourses which do not maintain such a continuous flow throughout the year. A total of approxi-

Map 6

SUITABILITY OF SOILS FOR SMALL COMMERCIAL BUILDINGS IN THE KEWASKUM PLANNING AREA



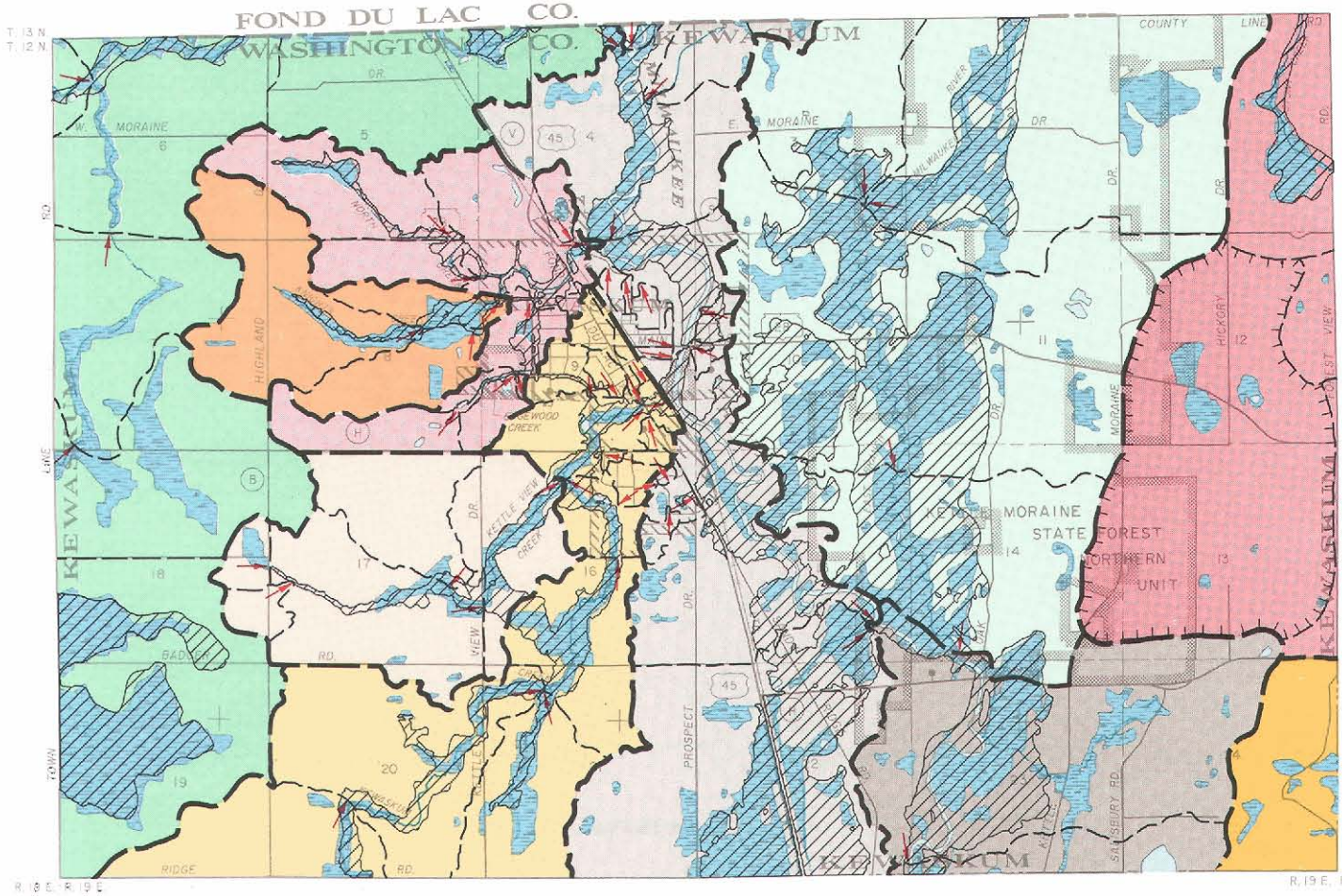
Source: U. S. Natural Resources Conservation Service and SEWRPC.

mately 31 lineal miles of perennial and intermittent watercourses exists within the planning area, including Edgewood Creek, Kettle View Creek, Kewaskum Creek, Knights Creek, North Creek, Stony Creek, and the Milwaukee River. Of the total of 31 lineal miles of watercourses within the planning area, about 22 miles, or 71 percent, are classified as perennial.

Floodlands: The floodlands of a stream are the wide, gently sloping areas contiguous to, and usually lying on both sides of, the stream channel. For planning

Map 7

SURFACE WATERS, WETLANDS, FLOODLANDS, AND WATERSHED FEATURES IN THE KEWASKUM PLANNING AREA



LEGEND

- SUBWATERSHED BOUNDARY
- SUBBASIN BOUNDARY
- PERENNIAL STREAM OR WATERCOURSE
- INTERMITTENT STREAM OR WATERCOURSE
- SUBBASIN DISCHARGE POINT
- AREA OF INTERNAL DRAINAGE
- 100-YEAR RECURRENCE INTERVAL FLOODLANDS
- WETLANDS
- SURFACE WATER

SUBWATERSHEDS

- UPPER MILWAUKEE RIVER
- MIDDLE MILWAUKEE RIVER
- EAST BRANCH MILWAUKEE RIVER
- WEST BRANCH MILWAUKEE RIVER
- NORTH BRANCH MILWAUKEE RIVER
- KEWASKUM CREEK
- KETTLE VIEW CREEK
- KNIGHTS CREEK
- NORTH CREEK
- STONY CREEK

NOTE: ALL ARE LOCATED WITHIN THE MILWAUKEE RIVER WATERSHED.

GRAPHIC SCALE
0 1/2 1 MILE
0 2000 4000 FEET

Source: Federal Emergency Management Agency and SEWRPC.

and regulatory purposes, floodlands are normally defined as those areas, excluding the stream channel, subject to inundation by the 100-year recurrence interval flood event. This is the flood event that has a 1 percent chance of occurring in any given year.

Floodland areas are generally not well suited to urban development, not only because of the flood hazard, but also because of the presence of high water tables and, generally, of soils poorly suited to urban uses. The floodland areas also generally contain such important elements of the natural resource base as high-value woodlands, wetlands, and wildlife habitat and, therefore, constitute prime locations for needed park and open space areas. Every effort should be made to discourage indiscriminate and incompatible urban development on floodlands, while encouraging compatible park and open space uses.

Floodlands within the planning area were delineated by the Regional Planning Commission under its Milwaukee River watershed planning program, the findings and recommendations of which are set forth in SEWRPC Planning Report No. 13, A Comprehensive Plan for the Milwaukee River Watershed. In addition, several studies have been undertaken by the Federal Emergency Management Agency and the former U. S. Department of Housing and Urban Development, Federal Insurance Administration, to provide flood hazard data for use in flood insurance programs. In areas for which detailed hydrologic and hydraulic data were available from the Regional Planning Commission, these Federal studies utilize the Commission data. Where such data were not available, the data necessary for the determination of flood hazards were developed by Federally sponsored studies. The delineated floodlands within the Kewaskum planning area are shown on Map 7 and encompass an area of about 3,190 acres, or about 20 percent of the planning area. This figure does not include approximately 120 acres of surface water in ponds and river and stream channels within the floodplains.

Wetlands

Wetlands are defined as areas that are inundated or saturated by surface water or groundwater at a frequency, and with a duration, sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include swamps, marshes, bogs, and similar areas. Precipitation provides water to wetlands either by surfacial runoff or by percolation through the soil as groundwater seepage. The location of a wetland in the landscape affects the type of water received. Wetlands can occur on slopes as well as in depressions.

Wetlands are generally unsuited, or poorly suited, for most agricultural or urban purposes. Wetlands, however, have important recreational and ecological values. Wetlands contribute to flood control and water quality enhancement, since such areas naturally store excess runoff temporarily, thereby tending to reduce peak flows and to trap sediments, nutrients, and other water pollutants. Wetlands may also serve as groundwater recharge and discharge areas. Additional important natural functions of wetlands include the provision of breeding, nesting, resting, and feeding grounds and predator escape cover for may forms of wildlife. In view of these important functions, continued efforts should be made to protect these areas by discouraging wetland draining, filling, and development for urban use. The latter can be particularly costly in both monetary and environmental terms.

As shown on Map 7, in 1990 wetlands covered about 2,400 acres, or about 15 percent of the planning area. It should be noted that such areas as tamarack swamps and other lowland wooded areas are classified as wetlands, rather than woodlands, because the water table is located at, near, or above the land surface and such areas are generally characterized by hydric soils supporting hydrophytic (water-loving) trees and shrubs. Wetland areas are located throughout the planning area, particularly adjacent to streams and rivers, including the Milwaukee River.

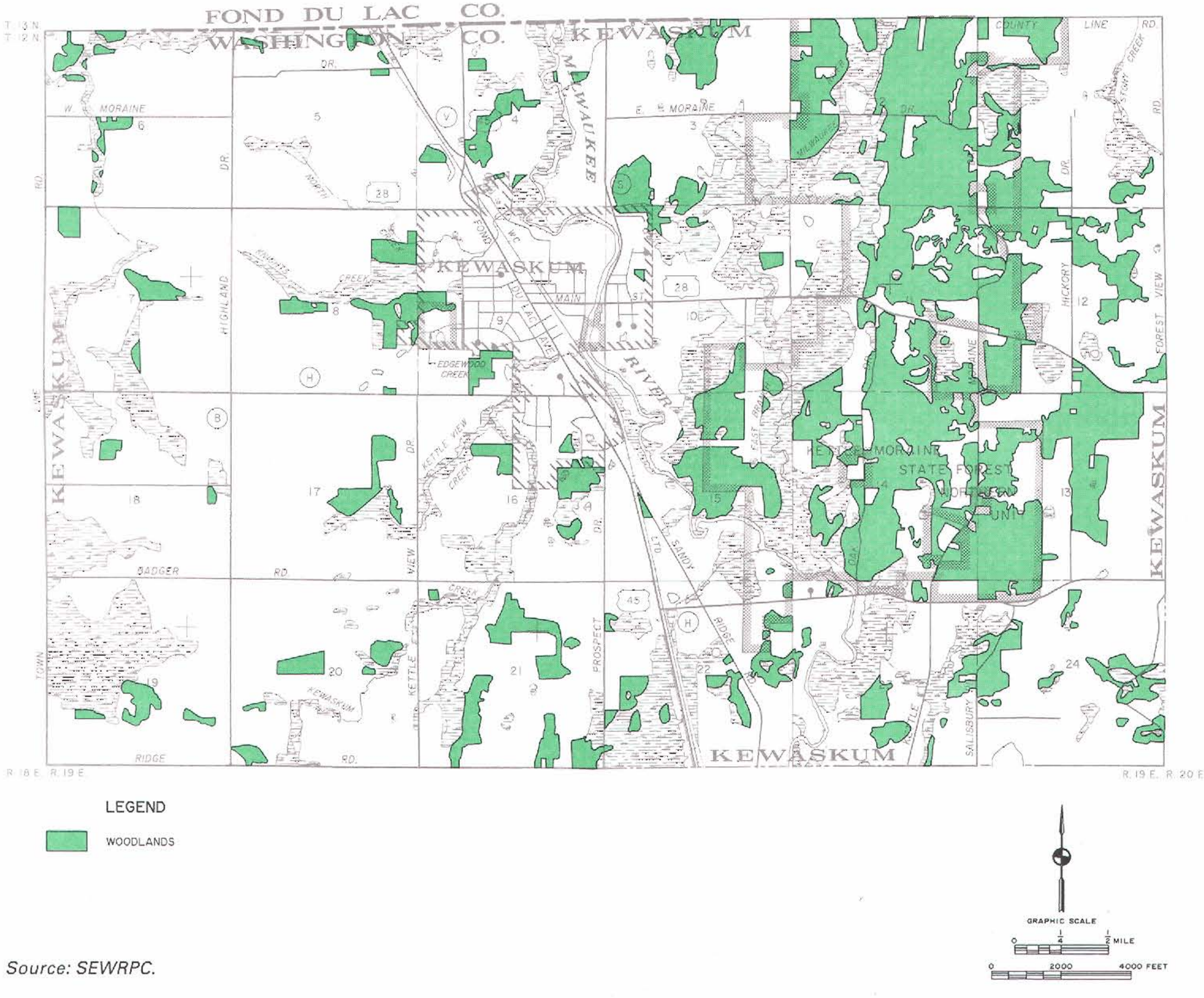
WOODLANDS

Woodlands are generally defined as those upland areas approximately one acre or more in size with 17 or more deciduous trees per acre, each measuring at least four inches in diameter at breast height and having 50 percent or more canopy coverage. Coniferous tree plantations and reforestation projects are also identified as woodlands.

Woodlands have value beyond any monetary return as forest products. Under good management, woodlands can serve a variety of beneficial functions. In addition to contributing to clean air and water and regulating surface water runoff, the presence of woodlands within the area can contribute to the maintenance of a diversity of plant and animal

Map 8

WOODLANDS IN THE KEWASKUM PLANNING AREA: 1990



Source: SEWRPC.

life in association with human life. The existing woodlands in the planning area, which required a century or more to develop, can be destroyed through mismanagement within a comparatively short time. The deforestation of hillsides contributes to rapid stormwater runoff, the siltation of lakes and streams, and the destruction of wildlife habitat.

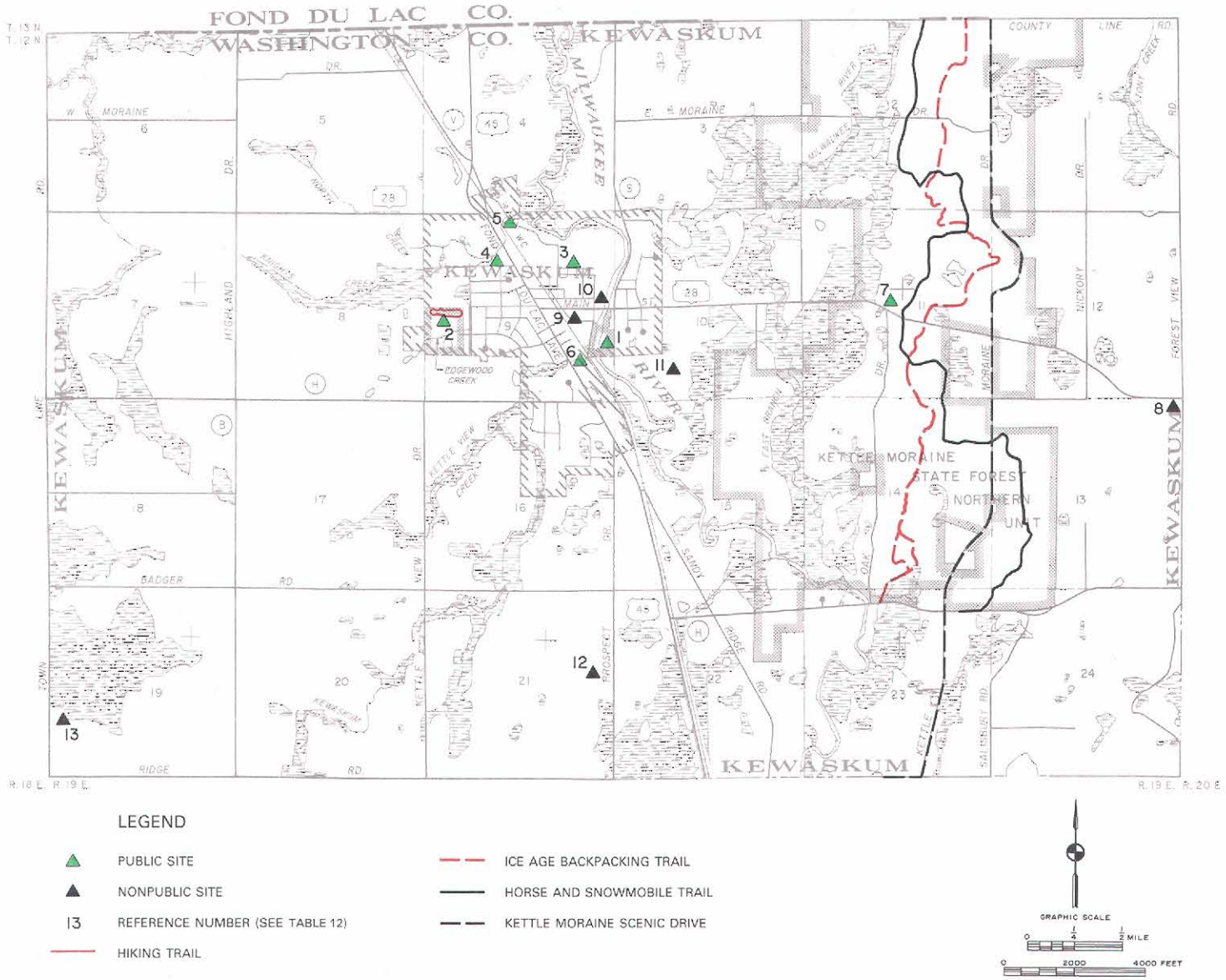
Woodlands, as shown on Map 8, are scattered throughout the planning area. As previously noted, lowland wooded areas, such as tamarack swamps, are classified as wetlands. In 1990, woodland areas covered about 2,600 acres, or about 16 percent of the planning area. These woodlands should be maintained for their scenic, wildlife habitat, open space, educational, recreational, and air and water quality protection values.

PARK AND OPEN SPACE SITES

To identify needed park and open space sites in the Kewaskum planning area, a necessary inventory of the existing sites was conducted. This section presents the findings of such inventory. The

Map 9

TRAILS, SCENIC DRIVE, AND PARK AND OPEN SPACE SITES IN THE KEWASKUM PLANNING AREA: 1992



Source: SEWRPC.

analysis includes descriptions of outdoor recreation sites, trails, and facilities both publicly and privately owned.

Park and Open Space Sites

An inventory of park and open space sites and outdoor recreational facilities in the Kewaskum planning area was conducted in 1992. As shown on Map 9 and listed in Table 12, in 1992 there were 13 such sites, including part of the Kettle Moraine State Forest—Northern Unit, encompassing a total of approximately 3,300 acres, or about 21 percent of the planning area. Of this total, seven sites encompassing about 2,900 acres were publicly owned. The Village of Kewaskum owned five of these sites, encompassing approximately 60 acres. Village-owned sites include the undeveloped Wildlife Drive Neighborhood Park and Kewaskum Creek

Table 12

OUTDOOR RECREATION FACILITIES IN THE KEWASKUM PLANNING AREA: 1992

Site Name	Number on Map 9	Acreage	Number of Selected Facilities									
			Regulation Baseball Diamonds	Basketball Courts	Playfields	Play Apparatus Areas	League Softball Diamonds	Sandlot Ball Diamonds	Tennis Courts	Picnic Shelters	Volleyball Courts	Other Facilities
Public												
River Hill Park	1	16	--	--	2	2	--	--	--	4	--	Ice-skating rink
Kewaskum Kiwanis Community Park	2	34	- -	- -	2	2	2	2	4	1	1	Swimming pond, beach house, soccer field, and nature trail
Kewaskum Elementary, Middle, and Senior High Schools	3	20	1	1	2	1	- -	2	4	- -	- -	Track and football field
Knights Avenue Neighborhood Park	4	1	- -	- -	1	- -	- -	- -	- -	- -	- -	- -
Wildlife Drive Neighborhood Park	5	3	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Kewaskum Creek Park	6	4	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Kettle Moraine State Forest–Northern Unit	7	2,828	- -	- -	- -	- -	- -	- -	- -	1	- -	Trail facilities
Subtotal	- -	2,906	1	1	7	5	2	4	8	6	1	- -
Nonpublic												
St. Michael's Church	8	1	- -	- -	- -	1	- -	- -	- -	- -	- -	- -
Holy Trinity Catholic School	9	4	- -	1	2	1	- -	- -	- -	- -	- -	- -
St. Lucas Evangelical Lutheran School	10	1	- -	1	1	1	- -	- -	- -	- -	1	- -
Hon-E-Kor Golf and Country Club	11	225	- -	- -	- -	- -	- -	- -	- -	- -	- -	27-hole golf course and clubhouse
Sunburst Ski Area	12	46	- -	- -	- -	- -	- -	- -	- -	- -	- -	Ski slopes and lodge
West-Bay Sporting Club, Inc.	13	79	- -	- -	- -	- -	- -	- -	- -	- -	- -	Hunting ground
Subtotal	- -	356	- -	2	3	3	- -	- -	- -	- -	1	- -
Total	- -	3,262	1	3	10	8	2	4	8	6	2	- -

Source: SEWRPC.

Park and the developed River Hill Park, Knights Avenue Neighborhood Park, and Kewaskum Kiwanis Community Park, which provide a variety of recreational facilities for local residents ranging from play apparatus to a swimming beach, as noted in Table 12.

Scenic Drive and Recreation Trails

Opportunities for such trail-oriented recreation activities as hiking, nature study, horseback riding, and pleasure driving are provided at trail facilities within park and open space sites in the planning area. In addition to the approximately one-half-mile-long nature trail provided in the Kewaskum Kiwanis Community Park, other trails facilities are located within, and traverse, the Kettle Moraine State Forest—Northern Unit. These include a scenic drive, a horse and snowmobile trail, and a

national scenic hiking trail, all shown on Map 9. These trail facilities offer the promise of enhancing the quality of the recreational amenities in the Kewaskum area.

The Kettle Moraine Scenic Drive is a marked route over public roadways within, and between, the Northern and Southern Units of the Kettle Moraine State Forest, intended for pleasure driving. As shown on Map 9, an approximately 4.5-mile-long segment of this 75-mile route in the Region is located in the Kewaskum planning area.

A trail, the Ice Age National Scenic Trail, traverses the Kewaskum planning area. This trail is part of a planned 1,000-mile national scenic trail, generally following natural glacial moraines, designated by Congress in 1982 as a hiking and bicycling route. The planned trail stretches from Door County in northeastern Wisconsin through the Kettle Moraine area to Interstate Park in northwestern Wisconsin. As shown on Map 9, about four miles of the Ice Age National Scenic Trail traverse the Kewaskum planning area in the Kettle Moraine State Forest—Northern Unit. As further shown on this map, approximately five miles of an existing equestrian and snowmobile trail also traverse this State Forest in the Kewaskum planning area.

SCENIC OVERLOOKS

Scenic overlooks are defined as areas that provide a panoramic or picturesque view. There are two important components of a scenic overlook: the picturesque view itself, which usually consists of a diversity of natural or cultural features, and the vantage point or viewpoint from which the scene and its features are observed. In identifying the scenic overlooks in the Kewaskum area three basic criteria were applied: 1) a variety of features to be viewed should exist harmoniously in a natural or rural landscape, 2) there should be a dominant or particularly interesting feature, such as a river or lake, which serves as a focal point of the picturesque view, and 3) the overlook should permit an unobstructed observation area from which a variety of natural features can be seen.

A special inventory of scenic overlooks meeting the aforementioned criteria was conducted. Using the best available topographic maps, all areas with a relief greater than 30 feet and a slope of 12 percent or greater were identified. Those areas of steep slope so identified, with a ridge of at least 200 feet in length and a view of at least three features, including surface water, wetlands, woodlands, or agricultural lands within approximately one-half mile of the ridge, were identified as scenic overlooks. In the Kewaskum planning area, 66 scenic overlooks were identified. Many of these were on long, continuous ridge lines located east of the Village of Kewaskum within the Kettle Moraine State Forest—Northern Unit and along the Milwaukee River and its tributaries. The topography and location of the scenic overlooks in the Kewaskum planning area are shown on Map 10.

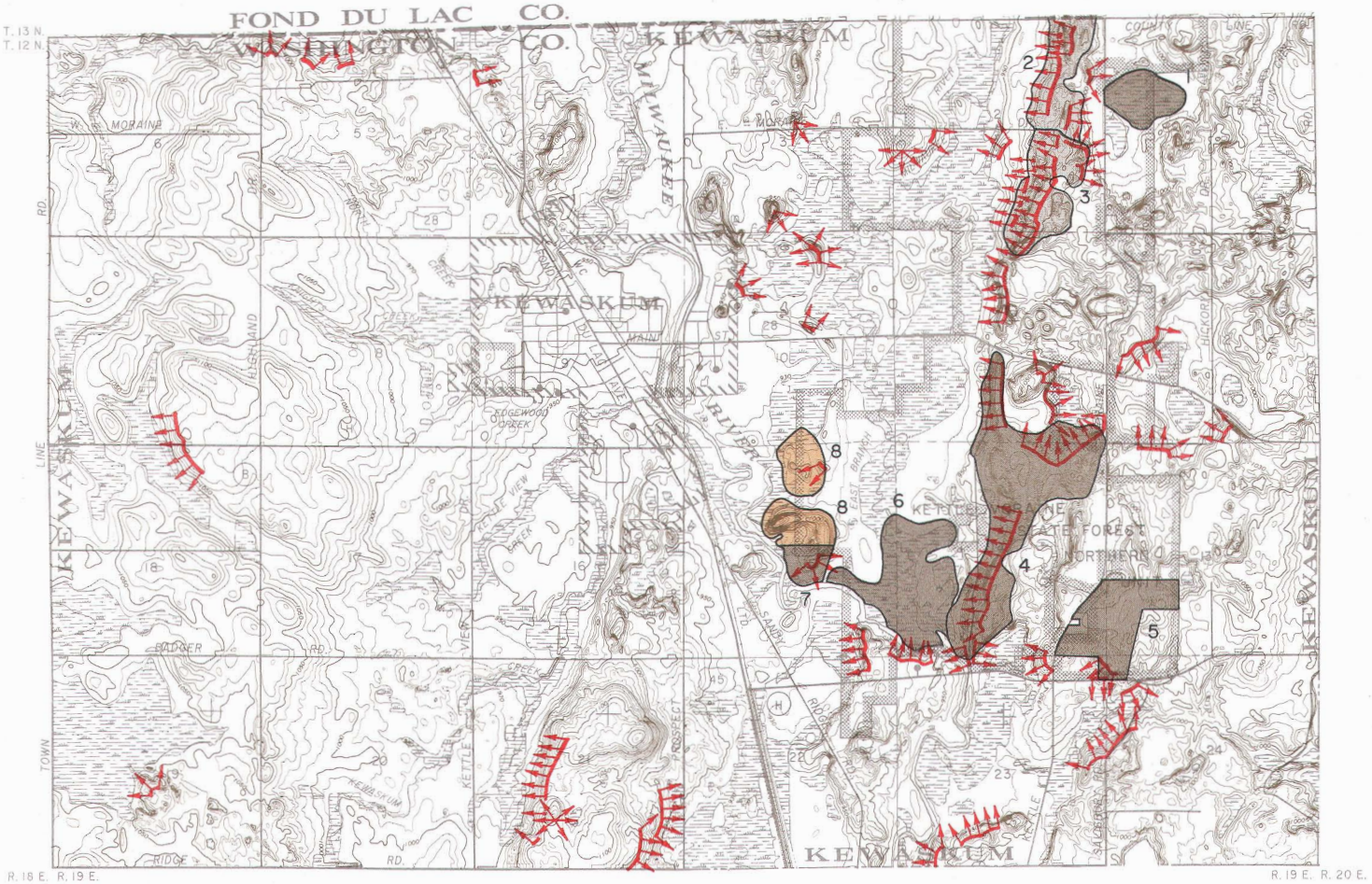
SCIENTIFIC AND NATURAL AREAS

Scientific and natural areas, as defined by the Wisconsin Scientific Areas Preservation Council, are tracts of land or water so little modified by human activity, or sufficiently recovered from the effects of such activity, that they contain intact native plant and animal communities believed to be representative of the pre-European settlement landscape. On the basis of the current condition of each natural area, each site was classified into one of the following four categories: 1) Designated State Natural Areas (SNA), 2) Natural Areas of Statewide or Greater Significance (NA-1), 3) Natural Areas of Countywide or Regional Significance (NA-2), and 4) Natural Areas of Local Significance (NA-3). Classification of an area into one of these four categories is based upon consideration of the diversity of plant and animal species and community types present; the structure and integrity of the native plant or animal community; the extent of disturbance from human activity such as logging, grazing, water level changes, and pollution; the commonness of the plant and animal communities present; unique natural features within the area; the size of the area; and the area's educational value.

A comprehensive inventory of scientific and natural area sites in Washington County was recently conducted by the Regional Planning Commission. As shown on Map 10 and identified in Table 13, in 1992 these inventories indicate that there were eight known scientific and natural area sites in the Kewaskum planning area, encompassing a total area of about 770 acres, or about 5 percent of the planning area. Of this total, one site, encompassing about 64 acres, was classified as a Designated State Natural Area; four sites, encompassing a total of about 394 acres, were classified as Natural Areas of Countywide or Regional Significance; and three sites, encompassing a total of about 312 acres, were classified as Natural Areas of Local Significance. Most of these sites are located in the Kettle Moraine

Map 10

SCENIC OVERLOOKS AND KNOWN SCIENTIFIC AND NATURAL AREAS IN THE KEWASKUM PLANNING AREA: 1992



Source: Wisconsin Department of Natural Resources and SEWRPC.

State Forest—Northern Unit and are thereby protected by the State from incompatible development.

ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS

As defined by the Regional Planning Commission, environmental corridors are elongated areas in the landscape that encompass concentrations of high-value elements of the natural resource base and which, therefore, should be preserved and protected as essentially natural, open uses. Such areas generally include one or more of the following elements of the natural resource base: poor soils and steep slopes; water resources, including rivers, streams, lakes, and associated shorelands, flood-

Table 13

KNOWN SCIENTIFIC AND NATURAL AREAS IN THE KEWASKUM PLANNING AREA: 1992

Number on Map 10	Name	Location	Owner	Acreage	Classification Code[a]	Description
1	Kettle Moraine Drive Bog	T12N, R19E, Section 1	State of Wisconsin	55	NA-2	A good-quality tamarack swamp and older, closed tamarack forest with black spruce, a rare species in Southeastern Wisconsin. The site illustrates a formerly open bog succeeding into a closed, mixed deciduous/ conifer lowland forest
2	Kettle Moraine Woods–North	T12N, R19E, Section 2	State of Wisconsin	86	NA-3	A mesic to dry-mesic forest on glacial topography of significant relief. The site is recovering from past grazing and cutting, and is an important link between other large forest stands to the north and south
3	Kettle Moraine Woods–South	T12N, R19E, Sections 2 and 11	State of Wisconsin	88	NA-3	Similar to Kettle Moraine Woods–North
4	Glacial Trail Forest	T12N, R19E, Sections 11 and 14	State of Wisconsin	230	NA-2	One of the largest contiguous tracts of mesic to dry-mesic forest remaining in Southeastern Wisconsin. Exotic garlic mustard is establishing along the Ice Age National Scenic Trail, which passes through this forest
5	St. Michael's Woods	T12N, R19E, Sections 13 and 14	State of Wisconsin	86	NA-2	An intact tract of mesic to dry-mesic hardwoods on rolling interlobate moraine. The site is recovering from past selective logging a good forest interior for breeding birds
6	Milwaukee River Floodplain Forest	T12N, R19E, Sections 14 and 15	State of Wisconsin	138	NA-2	A large forest along the Milwaukee River consisting of lowland hardwoods with small patches of mesic woods on isolated uplands. The site is important as a link connecting other large forested areas in this part of the Region
7	Kauth Woods	T12N, R19E, Section 15	Private	23	NA-2	A good-quality stand of mesic to dry-mesic hardwoods bordering the Milwaukee River. The ground flora is very rich and diverse with State-listed species
8	Kewaskum Woods State Natural Area	T12N, R19E, Section 15	State of Wisconsin and private	64	SNA	High-quality southern mesic woods east of the Milwaukee River consisting of two separate sections divided by an old field and pine plantation. The ground flora is rich and diverse with State-listed species. Several seasonally inundated depressions add to the site's diversity

[a]*Classification code SNA denotes officially Designated State Natural Areas; NA-2 denotes Natural Areas of Countywide or Regional Significance; and NA-3 denotes Natural Areas of Local Significance.*

Source: Wisconsin Department of Natural Resources and SEWRPC.

lands, and wetlands; woodlands; wildlife habitat areas; and remnant prairies. There are certain other elements which, although not a part of the natural resource base per se, are closely related to, or centered on, that base. These elements include: existing and potential parks and related open space sites, historic and archeological sites, scenic viewpoints, and scientific and natural areas. The

Kewaskum planning area includes almost all of these elements of the natural resource base except significant prairies.

The delineation of these natural resources and related elements on a map results in a linear pattern of elongated areas which have been termed "environmental corridors" by the Regional Planning Commission.[1] Map 11 shows the location and extent of these corridors, together with other environmentally significant areas, termed "isolated natural resource areas," within the planning area in 1990.

Primary Environmental Corridors

In 1990 about 5,700 acres, or about 37 percent of the planning area, were encompassed within the primary environmental corridors shown on Map 11. These corridors generally lie along perennial and intermittent streams in the planning area, including the Milwaukee River, and near the large wetland complexes associated with these streams. Primary environmental corridors are at least 400 acres in size, two miles long, and 200 feet wide. These corridors contain the best remaining woodlands, wetlands, and wildlife habitat areas within the planning area. They are, in effect, a composite of the best individual elements of the natural resource base. As such they have truly immeasurable environmental and recreational value.

The protection of the primary environmental corridors from intrusion by incompatible rural and urban uses, and thereby from degradation and destruction, should be one of the principal objectives of a local development plan. Preservation of these primary corridors in an essentially open, natural state, including park and open space uses and rural-estate residential uses, will serve to maintain a high level of environmental quality in the area, protect the natural beauty of the area, and provide valuable recreational opportunities. Such preservation will also avoid the creation of serious and costly environmental and developmental problems such as flooding, poor drainage, wet basements, failure of pavements and other structures, excessive infiltration of clear waters into sanitary sewers, and water pollution.

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[1]*A detailed description of the process of delineating environmental corridors is presented in SEWRPC Technical Record, Vol. 4, No. 2, "Refining the Delineation of Environmental Corridors in Southeastern Wisconsin," March 1981, pp. 1-21.*

Secondary Environmental Corridors

As shown on Map 11, in 1990 about 300 acres, or about 2 percent of the planning area, were included within the secondary environmental corridors. Secondary environmental corridors in the Kewaskum planning area are generally located along streams or serve as links between segments of primary environmental corridors. These corridors are at least 100 acres in size and one mile long, often containing remnant resources from former primary environmental corridors which have been lost to intensive agricultural or urban land uses. Secondary environmental corridors facilitate surface water drainage, maintain "pockets" of natural resource features, and provide for the movement of wildlife, as well as for the movement and dispersal of seeds for a variety of plant species. Such corridors should be preserved in essentially open, natural uses as urban development proceeds within the planning area, particularly when the opportunity is presented to incorporate them into urban stormwater detention areas, associated drainageways, and neighborhood parks and open spaces.

Isolated Natural Resource Areas

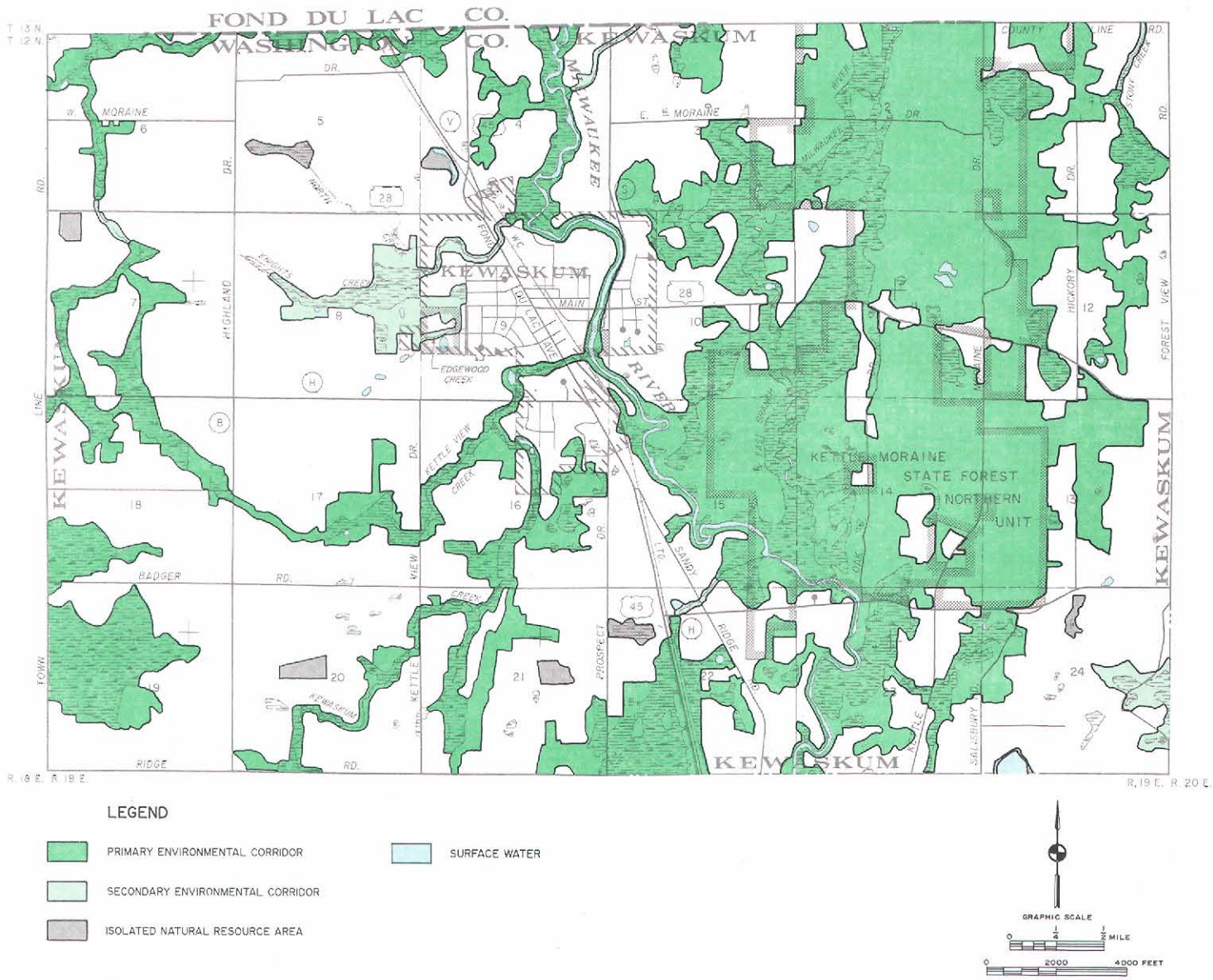
In addition to the primary and secondary environmental corridors, other small concentrations of natural resource-base elements exist within the planning area. These elements are isolated from the corridors by urban development or agricultural uses but, although separated from the environmental corridor network, may have important residual natural values. Isolated natural features may provide the only available wildlife habitat in an area, provide good locations for local parks and nature study areas, and lend aesthetic character and natural diversity to an area. Important isolated natural resource areas within the Kewaskum planning area include a geographically well distributed variety of isolated wetlands, woodlands, and wildlife habitats. These areas should also be protected and preserved in a natural state whenever possible. Such isolated natural resource areas five acres or greater in size are also shown on Map 11; they encompassed about 100 acres, or about 1 percent of the planning area in 1990.

PRIME AGRICULTURAL LANDS

Prime agricultural lands have been identified by the Regional Planning Commission as those lands which are well suited for agricultural use and meet specific criteria regarding agricultural soil capabilities and farm size. These criteria include: 1) the farm unit

Map 11

ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS IN THE KEWASKUM PLANNING AREA: 1990



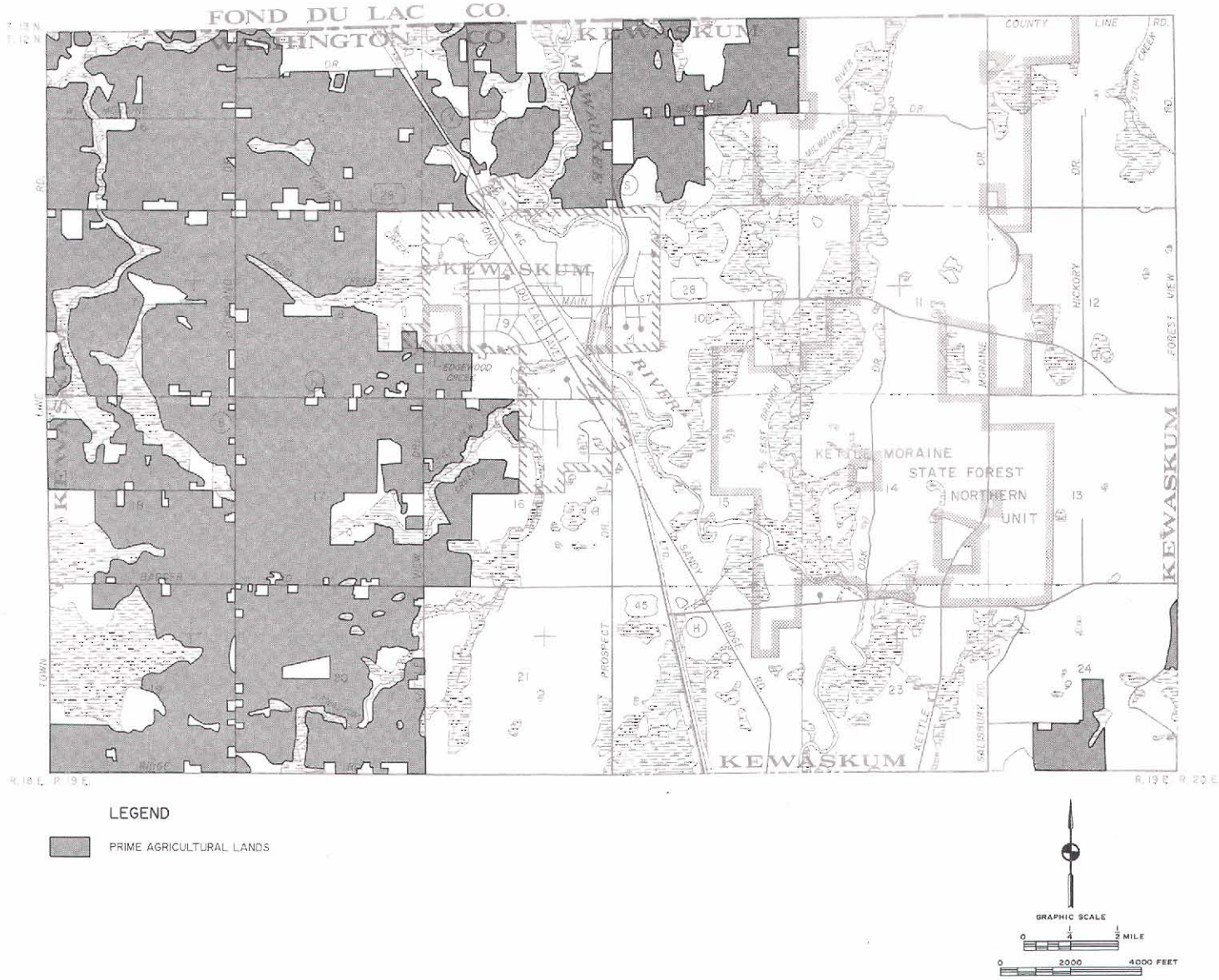
Source: SEWRPC.

must be at least 35 acres in size, 2) at least 50 percent of the farm unit must be covered by soils which meet U. S. Natural Resources Conservation Service (formerly U. S. Soil Conservation Service) national standards for prime farmland or farmland of statewide importance, and 3) the farm unit should be located in a block of farmland at least 100 acres in size. Most of the areas that meet these criteria within the Kewaskum planning area in 1990 are located in the western half of this area, as shown on Map 12. In 1990, prime farmlands totaled about 4,600 acres, or about 30 percent of all lands in the Kewaskum planning area.

Rapid conversion of farmland to urban use has recently become a matter of increasing public concern. Partly in response to this concern, the Wis-

Map 12

PRIME AGRICULTURAL LANDS IN THE KEWASKUM PLANNING AREA: 1990



Source: U. S. Natural Resources Conservation Service and SEWRPC.

consin Legislature in 1977 adopted a law commonly known as the "Farmland Preservation Act." It encourages the preparation of county farmland preservation plans and provides State income-tax credits for the maintenance of farmlands in delineated preservation areas. Ultimately, only those farmers owning lands within delineated prime agricultural areas zoned for exclusive agricultural use, and, in Southeastern Wisconsin, in an area for which a farmland preservation plan has been prepared, are eligible for the full State income-tax credits provided under the law.

In 1981, the Washington County Board of Supervisors adopted a farmland preservation plan prepared by the consulting firm Stockham & Vandewalle of Madison, Wisconsin, and documented in a

report titled Farmland Preservation Plan, Washington County, Wisconsin. The plan is intended to serve as a guide to the preservation of agricultural lands in the County. In addition, the plan recommends the protection of environmentally significant areas and makes recommendations regarding the location and intensity of urban development within the County through the year 2000. The plan also presents recommendations for implementation of the farmland preservation plan.

The Washington County farmland preservation plan categorized the farmland preservation areas into "primary" farmland and "secondary" farmland. Primary farmland, as defined under the County plan, with minor exceptions, meets the criteria for prime agricultural land established by the Regional Planning Commission and, accordingly, all primary farmlands identified under the County plan are included in the configuration of prime agricultural land shown in Map 12. Some areas identified under the County plan as secondary farmland, however, include farmland which does not meet the Regional Planning Commission criteria for prime agricultural land. Only those secondary farmlands which meet the Regional Planning Commission criteria have been included in the configuration of the prime agricultural land identified on Map 12.

CLIMATE

Extreme variations in such elements of a climate as temperature, precipitation, and snow cover directly affect the overall growth and development of a community. Climate determines the recreational interests that can be followed by residents of an area, from swimming, boating, and numerous other summer recreation activities to skiing, snowmobiling, and ice-skating in winter. Climate also has important economic implications. Temperature and precipitation affect the kinds of agricultural crops which can be produced, as well as the yields. Rainfall, temperature, and snow cover also affect the design of buildings and structures of various kinds and the cost of operating and maintaining both private and public facilities and services. Climate, therefore, has important implications for community development.

Climatic changes and certain important physical elements should be further considered in developing a community in an energy-efficient fashion that will improve human comfort and the overall quality of an environment for residents. Climatic elements that are important from the standpoint of energy utilization as well as of human comfort include solar radiation, air temperature, humidity, and wind. The affect of these climatic variables on an urban setting is further influenced by such physical elements as topography, vegetation, and structures. Specifically, climate has long been recognized in community planning and development, reflected in certain features of architectural design such as roof pitch and overhang, in the provision of curb lawns and landscaped islands for snow storage, in stormwater drainage design for runoff conveyance, in such public works standards as the minimum depth of cover for water mains. Climate should be considered in the location and orientation of future streets, blocks, lots, and, eventually, buildings in order to develop an urban area that can function efficiently and effectively in the local climatic conditions.

Temperature and Wind

The general climatic conditions of the Kewaskum planning area are typical of a continental climate, characterized by a continuous progression of markedly different seasons and a large range in annual temperature. Low temperatures during the long, cold winters are accentuated by prevailing frigid westerly and northwesterly winds; summer high temperatures are reinforced by the southwesterly winds common during that season. Such seasonal changes permit a wide array of recreational activities, from swimming to downhill skiing, to occur within the area.

Past temperature data for the West Bend area, which includes the Kewaskum planning area, indicate that air temperatures lag approximately one month behind summer and winter solstices during the annual cycle, with the result that July is the warmest month, with a mean temperature of about 71 degrees Fahrenheit, and January the coldest, with a mean temperature of about 18 degrees Fahrenheit. The inland areas of the Region, which includes the Kewaskum planning area, have a growing season, defined as the number of days between the last 32-degree Fahrenheit frost in the spring and the first in the fall, of about 155 days. The last 32-degree Fahrenheit frost in the spring normally occurs during the first half of May for such inland locations. The first freeze in the fall usually occurs in a two-week span during mid-October for all locations in the Region.

Elements that affect air temperature include wind, solar radiation, and certain physical characteristics of the area, including pavements, terrain, and three-dimensional features such as vegetation and struc-

tures. These climatic elements are also important for the potential utilization of solar energy in either a passive form (i.e., through proper orientation of building lots and structures for maximum heat gain in winter and minimum heat gain in summer) or active form (i.e., through proper orientation of building lots to accommodate the installation of efficient solar energy-collecting devices), both of which further serve to implement public policy regarding long-term energy conservation.

The air temperature in the Kewaskum planning area can also be affected by the size and locations of woodland and tree-planting areas. The moisture expelled by trees into the atmosphere through transpiration contributes to the lowering of temperatures in surrounding areas. This lowering of temperature can average from three to five degrees Fahrenheit below the annual mean for the area. The woodland and tree-planting areas also reduce the temperature further by providing shade while acting as a purifier for the air which passes through them. The amount of airborne particulate matter decreases rapidly toward the interior of a woodland, reflecting the effective filtering action of woodlands and tree plantings. Moreover, this effect is greatest in the summer because of the existence of foliage on deciduous trees, but is negligible in winter because of the dormancy of deciduous trees.

Climatic variables that further affect air temperature and are directly relevant to site-specific design include solar radiation and topographic characteristics. Several conclusions can be drawn, based upon the solar radiation considerations in the Kewaskum planning area, regarding the pattern of slopes and insolation (incoming solar radiation) in this area:

1. North-facing slopes have the lowest available insolation for solar heat gain while south-facing slopes have the highest available insolation.

2. East-facing slopes have maximum insolation in the morning while west-facing slopes have maximum insolation in the afternoon, with the potential for overheating structures in the summer.

On the basis of this information and the wind characteristics noted earlier, buildings should be oriented in a southerly direction and protected from the cold westerly and northwesterly winter winds during the winter. Southwesterly winds during the summer months should also be utilized for natural ventilation and cooling through proper design and use of topography, vegetation, and the orientation of buildings, lots, and structures.

Precipitation and Snow Cover

Precipitation within the Region takes the form of rain, sleet, hail, and snow. It ranges from gentle showers to destructive thunderstorms, as well as major rainfall-snowmelt events causing property and crop damage, inundation of poorly drained areas, and stream flooding. The influence of Lake Michigan as a source of moisture is reflected by slightly higher seasonal snowfalls for the entire Region compared to inland areas lying west of the Region. Minor intraregional snowfall differences occur in the topographically higher northwest portion of the Region, which includes the Kewaskum planning area. Seasonal snowfall tends to be greater here because moisture masses moving through that area are forced up onto the higher terrain, where lower temperatures, normally associated with increased height, induce more snowfall than that which would occur in the absence of the topographic barrier. Past precipitation data for the West Bend area indicate that the lowest average total precipitation was about 1.4 inches of water in January to a high of about 3.9 inches of water in July. The data also indicate that snow and sleet for this area are most likely to occur during the months of December through March, with an average monthly accumulation ranging from about 10 to 12 inches.

Frost Depth

The depth and duration of ground frost, or frozen ground, influences hydrologic processes, particularly the proportion of rainfall or snowmelt that will run off the land directly into storm sewerage systems and surface watercourses. The amount of snow cover is an important determinant of frost depth. Since the thermal conductivity of snow cover is less than one-fifth that of moist soil, heat loss from the soil to the colder atmosphere is greatly inhibited by the insulating snow cover. Frozen ground is common throughout the planning area for approximately four months each winter season, from late November through March, with frost penetration to a depth ranging from six inches to more than four feet occurring in January, February, and the first half of March. General engineering practices provide for a minimum cover of 36 to 48 inches over utility facilities to avoid freezing problems from such ground frost.

As discussed above, the interrelationship between various climatic variables such as temperature, pre-

cipitation, solar radiation, and air movement and certain physical characteristics have dramatic affect on defining local climates and everyday working and living conditions. Climate also provides opportunity for important economic recreational pursuits, from swimming to downhill skiing. The climatic elements discussed herein should be addressed in the design of the Village since they are relevant considerations for providing an urban setting that promotes energy-efficiency, enhances human comfort, and enriches environmental quality for the residents of the community.

Chapter IV

LAND USES, HISTORIC RESOURCES, COMMUNITY FACILITIES, AND PUBLIC UTILITIES

If the Village of Kewaskum land use and street system plans are to constitute a sound and realistic guide for making decisions concerning the physical development of the Village and environs, they must be based upon careful consideration of pertinent features of the built environment, as well as of the natural resource base, of the area. For the purposes of land use and street system plan preparation, the pertinent existing features of the built environment may be identified as: 1) land uses, 2) historic resources, 3) community facilities, and 4) public utility systems. Each of these features, as it affects the physical development of the Village and its environs, is described in this chapter.

EXISTING LAND USES

The Regional Planning Commission inventories existing land use within the Region approximately every five years. In addition, a special field survey was conducted by the Commission in 1992 to update the 1990 Commission inventory of the nature and extent of existing land uses in the Kewaskum planning area. The data collected and collated were mapped and analyzed to provide a basis for considering future land use development patterns in the Kewaskum area. The Commission 1990 data for such nonurban land uses as water, wetlands, woodlands, agriculture, and other open lands were used to represent 1992 data for such uses, since it could be assumed that such uses did not change significantly from 1990 to 1992, except for those areas converted to urban uses and accounted for as urban uses in the 1992 update.

The existing 1992 land uses in the approximately 24-square mile Kewaskum planning area are shown on Map 13 and the amount of land devoted to each use is set forth in Table 14. Existing land uses within the 1992 incorporated area of the Village of Kewaskum are shown on Map 14 and the amount of land devoted to each type of land use in the Village is set forth in Table 15. In 1992 the Village of Kewaskum occupied almost 1.5 square miles, or about 6 percent of the planning area.

Several important elements of the character of the planning area can be noted from examining Table 14 and Map 13. The largest single land use in the Kewaskum planning area in 1992 was still agriculture, representing about 51 percent of the planning area. The next-largest use consists of natural areas and other undeveloped open lands, totaling some 39 percent of the planning area. Urban land uses, consisted of residential and transportation and utilities land uses; each utilized about 3 percent of the planning area. Residential lands uses, however, represented the largest share of the urban uses in the Village of Kewaskum. This information supports the perception of the Kewaskum planning area as consisting of an urban center, the Village of Kewaskum, surrounded by still largely "open" lands that provide an attractive setting for the Village proper.

Urban Land Uses

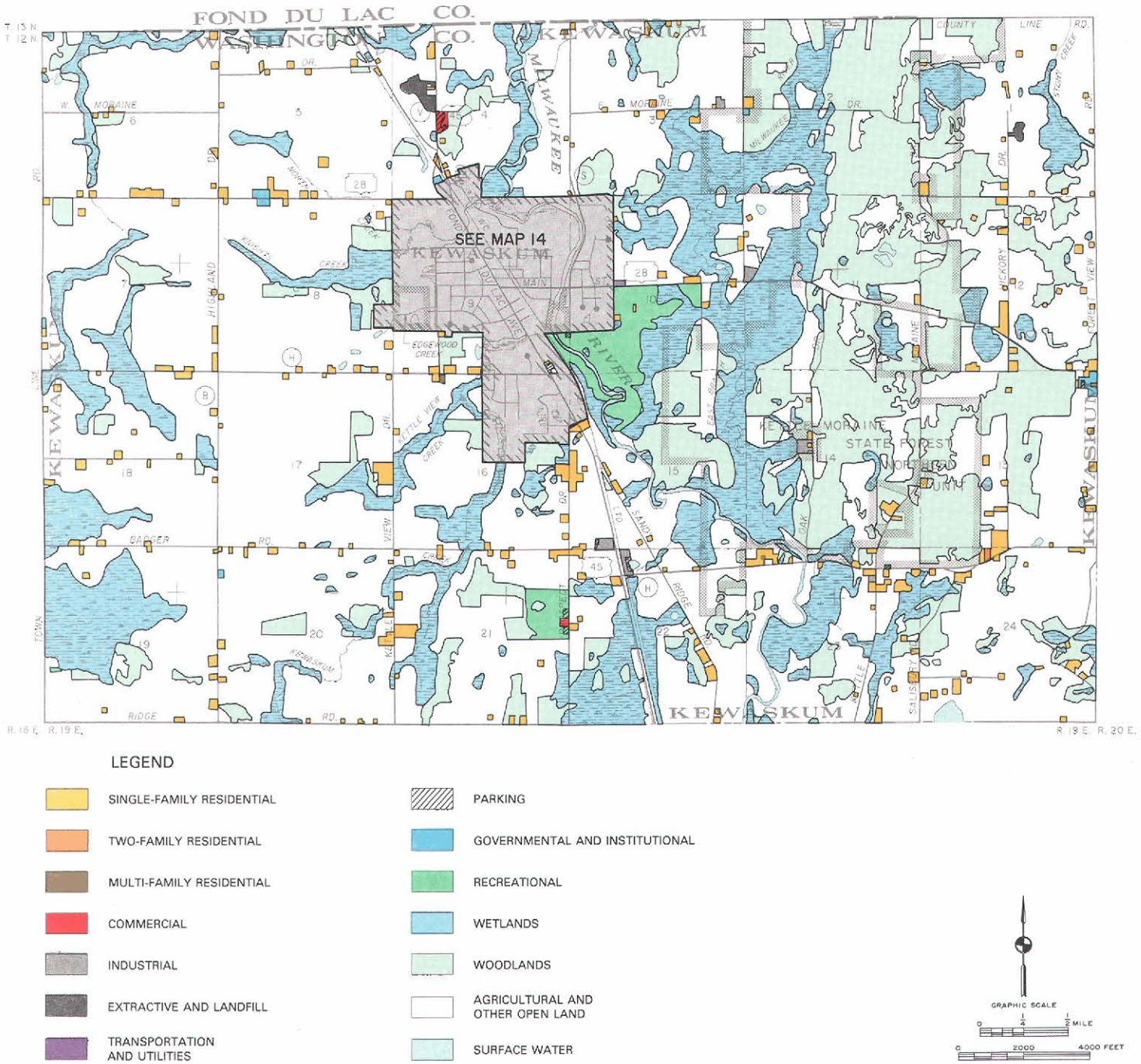
In 1992, urban land uses occupied almost 1,500 acres, or about 10 percent of the planning area, and about 520 acres, or about 60 percent of the total area within the Village of Kewaskum corporate limits. A discussion of the different types of urban uses within the planning area and within the Village follows.

Residential Land Use: The residential land use portion of a land use plan normally holds the most interest for community residents. Since the residential land use element of the plan seeks primarily to provide a safe, attractive, and comfortable setting for residential development, it is very important that this element be given careful consideration. The nature and extent of residential development is a major determinant of the type and location of utilities and community facilities needed to serve local residents.

In 1992, residential land use accounted for about 510 acres, or about 34 percent of the urban land uses and about 3 percent of the total land uses in the Kewaskum planning area. Within the 1992 Village of Kewaskum corporate limits, residential

Map 13

EXISTING LAND USE IN THE KEWASKUM PLANNING AREA: 1992



Source: SEWRPC.

land use accounted for about 210 acres, or about 40 percent of the urban land uses and about 24 percent of the total land uses in the Village proper. As shown on Map 14, single-family residential uses in the Village are located throughout the Village; two-family and multi-family residential land uses are primarily adjacent to arterial streets.

Commercial Land Use: In 1992, commercial retail sales, services, office buildings, and associated parking uses accounted for about 40 acres, or about 3 percent of the urban land uses and about 0.3 percent of the total land uses in the Kewaskum planning area. Within the corporate limits of the Village of Kewaskum, commercial land uses

Table 14

SUMMARY OF EXISTING LAND USE IN THE KEWASKUM PLANNING AREA: 1992

Land Use Category	Number of Acres	Percent of Subtotal (urban or nonurban)	Percent of Total
Urban[a]			
Residential			
Single-Family[b]	478.5	32.0	3.1
Two-Family	10.6	0.7	0.1
Multi-Family	21.7	1.4	0.1
Subtotal	510.8	34.1	3.3
Commercial	40.9	2.7	0.3
Industrial	53.0	3.6	0.3
Transportation and Utilities			
Arterial Streets and Highways	149.3	10.0	1.0
Collector and Local Streets	356.4	23.8	2.3
Railroads	51.0	3.4	0.3
Communications, Utilities, and Others	5.1	0.3	--[c]
Subtotal	561.8	37.5	3.6
Governmental and Institutional	82.3	5.5	0.5
Recreational[d]			
Public	38.7	2.6	0.2
Private	210.4	14.0	1.4
Subtotal	249.1	16.6	1.6
Urban Land Use Subtotal	1,497.9	100.0	9.6
Nonurban			
Natural Areas			
Water	152.7	1.1	1.0
Wetlands	2,407.0	17.1	15.4
Woodlands	2,552.7	18.1	16.4
Subtotal	5,112.4	36.3	32.8
Extractive and Landfill	15.8	0.1	0.1
Agricultural	7,971.2	56.6	51.2
Other Open Lands[e]	982.9	7.0	6.3
Nonurban Land Use Subtotal	14,082.3	100.0	90.4
Total	15,580.2	--	100.0

[a] *Includes related off-street parking areas for each urban land use category.*

[b] *Includes farm residences but not farm buildings included in the agricultural land use category.*

[c] *Less than 0.05 percent.*

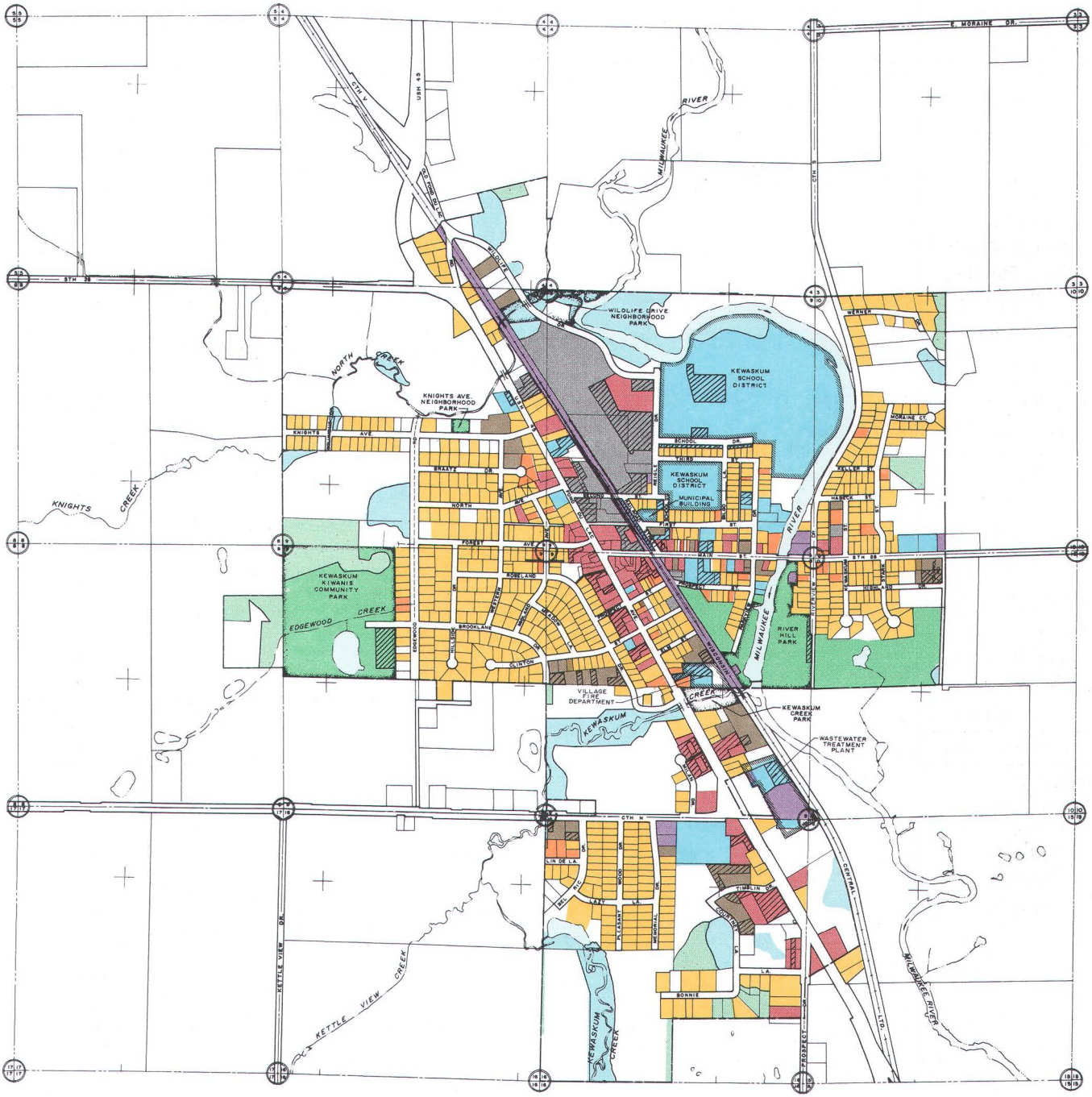
[d] *Includes only those areas used for intensive outdoor recreational activities.*

[e] *Includes unused lands.*

Source: SEWRPC.

Map 14

EXISTING LAND USE IN THE VILLAGE OF KEWASKUM: 1992



LEGEND

- SINGLE-FAMILY RESIDENTIAL
- TWO-FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- COMMERCIAL
- PARKING
- INDUSTRIAL
- TRANSPORTATION AND UTILITIES
- GOVERNMENTAL AND INSTITUTIONAL
- RECREATIONAL
- WETLANDS
- WOODLANDS
- AGRICULTURAL AND OTHER OPEN LANDS
- SURFACE WATER

GRAPHIC SCALE
0 400 800 1600 FEET

Source: SEWRPC.

Table 15

SUMMARY OF EXISTING LAND USE IN THE VILLAGE OF KEWASKUM: 1992

Land Use Category	Number of Acres	Percent of Subtotal (urban or nonurban)	Percent of Total
Urban[a]			
Residential			
Single-Family[b]	179.9	34.4	20.6
Two-Family	9.4	1.8	1.1
Multi-Family	20.7	4.0	2.4
Subtotal	210.0	40.2	24.1
Commercial	32.4	6.2	3.7
Industrial	33.6	6.4	3.8
Transportation and Utilities			
Arterial Streets and Highways	27.3	5.2	3.1
Collector and Local Streets	76.5	14.6	8.8
Railways	10.2	2.0	1.2
Communications, Utilities, and Others	5.1	1.0	0.6
Subtotal	119.1	22.8	13.7
Governmental and Institutional	69.7	13.3	8.0
Recreational[c]			
Public	38.2	7.3	4.4
Private	20.1	3.8	2.3
Subtotal	58.3	11.1	6.7
Urban Land Use Subtotal	522.6	100.0	60.0
Nonurban			
Natural Areas			
Water	25.9	7.4	3.0
Wetlands	49.2	14.1	5.6
Woodlands	26.5	7.6	3.0
Subtotal	101.6	29.1	11.6
Agricultural	166.5	47.7	19.1
Other Open Lands[d]	81.0	23.2	9.3
Nonurban Land Use Subtotal	349.1	100.0	40.0
Total	871.7	--	100.0

[a] *Includes related off-street parking areas for each urban land use category.*

[b] *Includes farm residences but not farm buildings included in the agricultural land use category.*

[c] *Includes only those areas used for intensive outdoor recreational activities.*

[d] *Includes unused lands.*

Source: SEWRPC.

accounted for about 30 acres, or about 6 percent of the urban land uses and about 4 percent of the total land uses in the Village proper. Commercial land uses in the Village are located predominantly in the central business district, or "downtown" area, of the Village, along Main Street (STH 28) and Fond du Lac Avenue (USH 45).

Industrial Land Use: In 1992, industrial land uses accounted for about 50 acres, or about 4 percent of the urban land uses within the planning area and about 0.3 percent of the total planning area. Within the Village of Kewaskum proper, industrial land uses in 1992 accounted for about 30 acres, or about 6 percent of the urban land uses and about 4 percent of the total land uses in the Village. Two major industries located in the center of the Village are Kemps Diary Products and Regal Ware, Inc., the largest independently owned cookware manufacturer in North America.

Transportation and Utilities Land Use: In 1992, transportation and utility land uses, which include a railroad line, streets and highways, and utility rights-of-way, accounted for approximately 560 acres of land in the planning area, or about 38 percent of the urban land uses in the planning area and about 4 percent of the total planning area. Within the 1992 incorporated area of the Village, these land uses accounted for about 120 acres, or about 23 percent of the urban land uses and about 14 percent of the total area within the Village corporate limits. Major transportation and utility facilities include USH 45 (Fond du Lac Avenue), the Fox River Valley Railroad (former Chicago & North Western Railway) line, and the Kewaskum sewage treatment plant.

Governmental and Institutional Land Use: In 1992, governmental and institutional land uses accounted for about 80 acres of land in the Kewaskum planning area, representing about 6 percent of the urban land uses of the planning area and about 0.5 percent of the total planning area. Within the Village of Kewaskum proper, in 1992, these land uses accounted for about 70 acres, or about 13 percent of the urban land uses and about 8 percent of the total Village area. Major public governmental and institutional land uses in the planning area include the Village Hall, the Village fire station, and the Kewaskum elementary, middle, and high schools.

Parks and Recreational Land Use: In 1992, developed park and recreational land uses represented approximately 250 acres of land, or about 17 percent of the urban portion of the Kewaskum planning area and about 2 percent of the total land area within the planning area. Within the 1992 corporate limits of the Village, these land uses accounted for about 60 acres, or about 11 percent of the urban land uses and about 7 percent of the total land uses within the Village proper. As shown on Maps 13 and 14, this category includes only those areas that have been developed for park and recreational uses, with such facilities as a swimming pond, tennis courts, and playfields.

In addition to the intensively used recreational areas described above, there are a number of park and open space sites that are used for such non-intensive recreational activities as walking and nature study. In 1992, park and open space sites in the planning areas, including those used for both passive and intensive recreational activities, encompassed a total of approximately 3,300 acres, or about 32 percent of the planning area. Park and open space sites are shown on Map 9 and listed in Table 12 of Chapter III of this report.

Nonurban Land Uses

Nonurban land uses, including water, wetlands, woodlands, agricultural lands, and other open lands, totaled about 14,080 acres, or about 90 percent of the Kewaskum planning area in 1992; such uses occupied about 350 acres, or about 40 percent of the area within the Village corporate limits. The various types of nonurban land uses that occupy the Kewaskum area are described below.

Natural Areas: Natural areas include surface waters, wetlands, and woodlands. Natural areas encompassed about 5,110 acres, or about 33 percent of the planning area in 1992. Of this total, surface waters represented about 150 acres, or about 1 percent of the planning area; wetlands represented about 2,410 acres, or about 15 percent of the planning area; and woodlands occupied about 2,550 acres, or about 16 percent of the planning area. In the Village of Kewaskum in 1992, natural areas encompassed about 100 acres, or about 12 percent of the Village area. Surface waters encompassed about 25 acres, or about 3 percent of the Village; wetlands encompassed about 50 acres, or about 6 percent of the Village; and woodlands encompassed about 25 acres, or about 3 percent of the Village. Information regarding the distribution and importance of natural areas within the planning area is provided in Chapter III of this report.

Extractive and Landfill: Lands used for resource extraction and landfill accounted for a total of about 15 acres, or about 0.1 percent of the planning area in 1992. There is an approximately 12-acre extractive site lying north of the Village on the west side of USH 45 and an approximately three-acre old landfill site located east of Hickory Drive in the northeast corner of the Kewaskum planning area. No extractive or landfill sites existed in the Village in 1992.

Agricultural Land Use: In 1992, prime and other agricultural lands occupied about 7,970 acres, or about 51 percent of the planning area. Within the 1992 Village corporate limits, agricultural land uses accounted for about 165 acres, or about 19 percent of the area in the Village. The agricultural land use category includes all croplands, pasture lands, orchards, nurseries, fowl and fur farms, and farm buildings other than residences. Farm residences, together with an approximately 20,000-square-foot dwelling site area, were classified as single-family residential land uses.

Other Open Lands: Other open lands include lands in rural areas that are not farmed or natural areas, as well as lands in urban areas that have not been completely developed. Examples of open lands in urban areas are undeveloped park sites, excess transportation rights-of-way, subdivision outlots, and undeveloped portions of commercial and industrial lots. Other open lands accounted for about 980 acres, or about 6 percent of the planning area in 1992. Within the Village in 1992, these open lands encompassed about 80 acres, or about 9 percent of the Village area.

HISTORIC RESOURCES

The preservation of historic places is intended to help ensure that the historic heritage of a community is protected and enhanced over time. Historic preservation planning recognizes that historic places are valuable resources whose damage or loss would be detrimental to the community. The key elements of an effective historic preservation planning effort include: 1) a thorough survey of historic resources, 2) community support for historic preservation, and 3) integration of the historic preservation planning into the comprehensive community planning process. The principal means for implementing historic preservation planning include a local landmarks or historic preservation commission created by municipal ordinance, a zoning ordinance with specific districts and district regulations for protecting historic sites and structures, and a demolition-control ordinance. These principal means may be supplemented by the use of easements and taxation policies.

The importance of historic preservation planning is based on the assumption that the historic resources of a community are valuable and should be carefully considered in planning for community development and redevelopment. Historic preservation can help to maintain the unique identity of a community, especially within a community's central business district, in a time when many factors tend to create a national homogeneity in the environment. Other benefits of historic preservation include: promoting tourism, increasing real estate values and municipal tax revenues, arresting decay in declining areas, creating community pride, and conserving cultural resources. Despite these potential benefits, other forces such as economics, public attitudes, and existing laws can sometimes work against historic preservation. Through proper planning, however, the impediments to historic preservation can be reduced.

To be most effective, historic preservation planning for communities such as the Village of Kewaskum should be integrated into the overall community planning process. As an integral part of the total planning process, historic preservation can be considered in addition to all the other needs and goals of the community, thereby affording such preservation equal consideration with other planning issues. In this way, historic preservation can become an issue of continuing concern and can be built into the ongoing development and redevelopment decision-making process of the community.

Existing Historic Preservation Inventories

Realizing the importance of historic preservation in the Kewaskum planning area, a detailed inventory of the significant architectural and historical sites and buildings in the Village and environs should be conducted. Such an inventory should focus on the identification, evaluation, documentation, and registration of the historically significant architectural and cultural resources in the Kewaskum area. Specifically, the inventory should provide a listing of the architectural and historic sites in the Kewaskum planning area, including historical information for many selected sites in the inventory, with a map showing the location of a proposed

historic district encompassing many of the most significant historic sites.

This inventory would be intended to provide a basis for the nomination of the most significant sites and buildings in the respective district for inclusion on the National Register of Historic Places, a mark of special status. The survey document should present a descriptive inventory of the historic places and buildings in a given area and identify some of them as potentially eligible for listing on the National Register, pending a further detailed examination. The reconnaissance survey cards and intensive survey forms used to conduct the inventory would elicit pertinent information about the sites and buildings within a proposed historic district, such as location, ownership, building site, construction and geographic data, historic significance of the district, and major historic and bibliographic references. These data can be drawn upon when establishing historic preservation-related zoning districts, when making decisions regarding property identified as of historic value, or when making improvements within the historic district.

In 1993, 90 existing buildings in the Kewaskum planning area, including 69 buildings in the Village of Kewaskum, had been identified as historic in one survey or more. General historic surveys and inventories which cover the Kewaskum planning area are documented in H. Russell Zimmermann's book, The Heritage Guidebook: Landmarks and Historical Sites in Southeastern Wisconsin, 1976; the second edition of Richard W. E. Perrin's book, Historic Wisconsin Buildings: A Survey in Pioneer Architecture: 1835-1870, 1981; the reports on the reconnaissance surveys conducted by the State Historical Society of Wisconsin, Division of Historic Preservation, in 1973, 1978, and 1992; the bicentennial book compiled by Mark Smucker, Charles F. Miller, and the Kewaskum Bicentennial Committee, Kewaskum Then and Now, 1976. Seven historic buildings, of which one has been demolished, were identified as of historic significance in the Zimmermann book, and one building, the Muckerheide House, was so identified in the Perrin book. The bicentennial book, Kewaskum Then and Now, contains photographs of approximately 24 existing buildings that may have historic significance. The reconnaissance surveys conducted by the State Historical Society initially cited 89 buildings with potential historic significance; however, five of these buildings have been demolished since the surveys were conducted.

In 1982, the Village saved an 1847 log cabin from demolition in the Town of Scott, Sheboygan County, by relocating and reassembling the donated building at 1200 Parkview Drive in the Village. The cabin currently serves as part of the Kewaskum Historic Museum and houses the Kewaskum Historical Society, founded in 1975.

All the buildings identified in the aforereferenced documents which may be of historic significance should be considered in a comprehensive historic inventory. Map 15 identifies the location and historic name, if known, or historic use of the places mentioned in these documents and surveys. As might be expected, there is some overlap among the inventories, with most buildings appearing on two or more surveys. Furthermore, there are likely to be some potential historic places that exist in the Kewaskum planning area and are not mentioned in these documents. The large number of identified potential historic places in the Kewaskum planning area and the high concentration of such historic places in the "downtown" area of the Village indicate that the area is rich in historic resources. The Village of Kewaskum should inventory and henceforth preserve historically significant structures from disrepair or further demolition, as noted above, to the maximum extent possible.

COMMUNITY FACILITIES

To serve the needs of the general public, certain community facilities should be provided by the public sector. Such public facilities would help meet the ultimate goal of protecting and promoting the general public health, safety, morals, and welfare of the present and future generations of residents of the Kewaskum area. Data on certain public facilities is, therefore, essential to eventually determine if any additional lands is needed to accommodate expansions or new developments of community facilities.

Schools

The Kewaskum planning area lies within the Kewaskum School District, which owns six schools: Kewaskum High School, Kewaskum Middle School, and Kewaskum, Beechwood, Farmington, and Wayne Elementary Schools. Beechwood, which was closed in 1986, Farmington, and Wayne Elementary Schools are located outside the Kewaskum planning area. The 1992-1993 school year enrollments and capacities of each public school in the district are set forth in Table 16. The Kewaskum School

Table 16

1992-1993 SCHOOL YEAR ENROLLMENTS AND SCHOOL CAPACITY FOR THE KEWASKUM SCHOOL DISTRICT

School	1992-1993 Enrollment	School Capacity
Kewaskum High School (grades 9-12)	624	800
Kewaskum Middle School (grades 6-8)	402	350
Kewaskum Elementary School (grades Pre-K-5)	365	400
Wayne Elementary School (grades K-5)	123	150
Farmington Elementary School (grades K-5)	270	323
Beechwood Elementary School[a]	--	--
Total	1,784	2,023

[a]*Closed in 1986.*

Source: School District of Kewaskum and SEWRPC.

District conducted a study of facility needs to determine if, and to what extent, the school facilities should be expanded to accommodate future enrollments and needs, discussed further in Chapter VII.

In addition to the public schools described above, two private schools, Holy Trinity Roman Catholic School and St. Lucas Lutheran School, served in the Village in 1993. The former, which has a capacity of 224 students, served 188 students from grades 1 through 8 in the 1992-1993 school year. The latter, which has a capacity of about 185 students, served 164 students from pre-kindergarten through eighth grade in the 1992-1993 school year. The Lutheran school has plans to complete four additional classrooms, each with a capacity of 30 students, in the near future.

There are also two public institutions of higher education that serve the Kewaskum area and are within short commuting distances from the Kewaskum planning area.

The University of Wisconsin-Washington County Center (UWWC), located south of Washington Street on University Drive, on the west side of the City of West Bend, is one of 14 two-year campuses in the University of Wisconsin system. UWWC offers a well-balanced program of liberal arts and technical-professional courses. The courses offered at UWWC, which may be transferred to four-year colleges and universities, provide students with a foundation for more than 50 different professional and specialized fields of study.

The other college is the Moraine Park Technical College, also located in the City of West Bend, on the northeast corner of Main Street and Green Tree Road. This college is part of the State Vocational, Technical and Adult Education (VTAE) system. It offers classes emphasizing vocational education, preparing students for jobs requiring special technical skills. The types of general programs available at the technical college include associate degree programs, vocational diploma programs, adult and continuing education programs, and apprenticeship training.

Village Hall

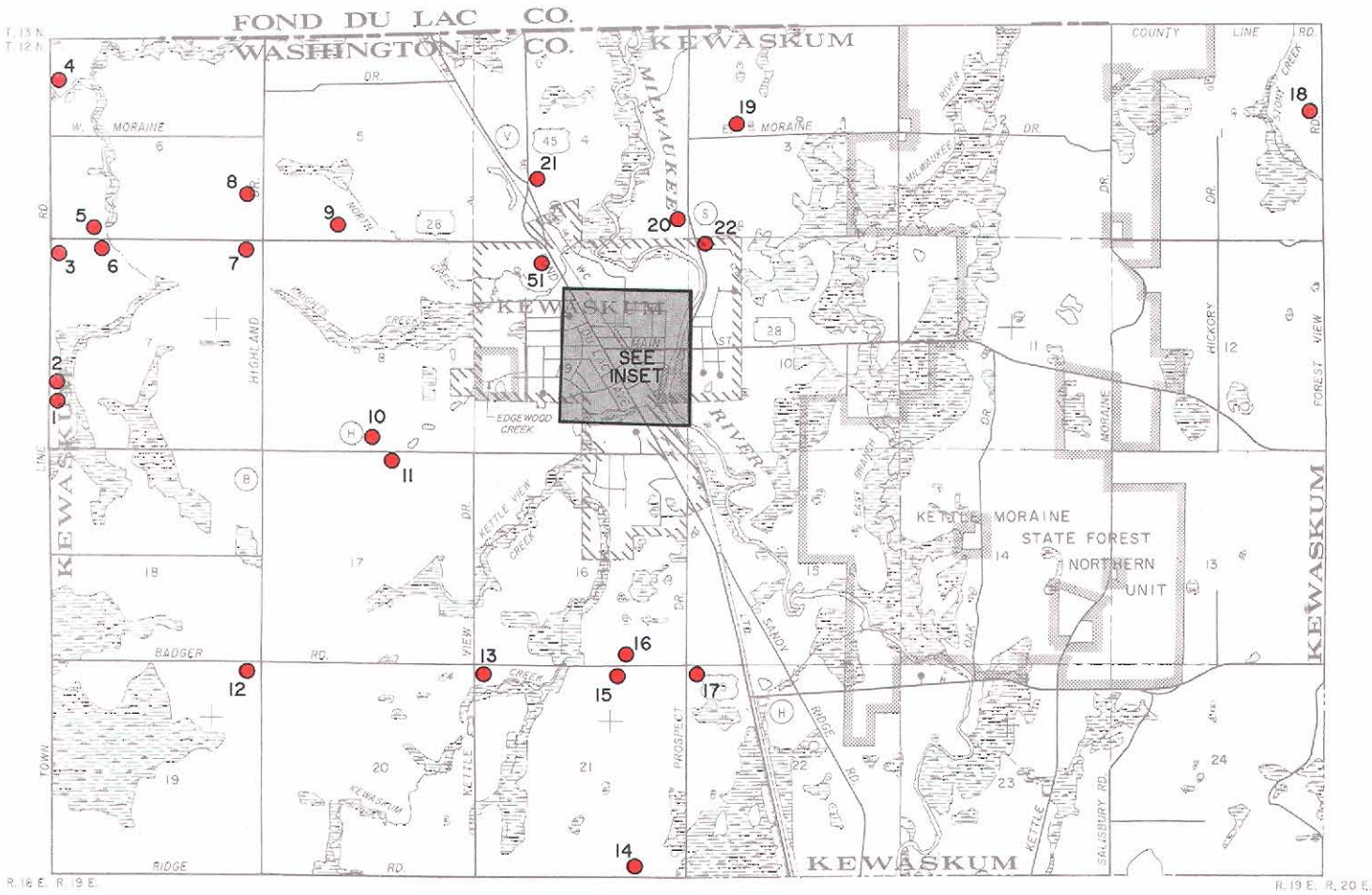
The present Municipal Building, at 204 First Street, was constructed in 1950 to house the fire department, police department, library, administrative offices, and the Village Board chambers. The building was renovated in the 1980s to supply additional office space and better to utilize the vacant fire station garage in the building. The renovated building, completed in 1985, with a total floor area of 9,300 square feet on an approximately 0.5 acre site, now houses the police department, library, administrative offices, Board chambers, and a community room. The Village recently purchased the old Sentry Food Store site to provide additional public parking spaces in the central business district. A building on the subject site could function as both library and community center to meet present as well as future community needs for library services and community meeting rooms, freeing space in the Municipal Building for future expansion.

Public Library

The Kewaskum Public Library occupied approximately 3,150 square feet of space in the Village Hall, with an address of 206 First Street. In 1993, the library housed 14,482 books and subscribed to total of 68 magazines and newspapers. As already noted, the Village recently purchased the old Sentry Food Store site; a proposed building at this site could serve as both a new library and community center site while providing additional public parking space for the central business district. As a member of the Mid-Wisconsin Federated Library System, the Kewaskum Public Library has reciprocal agreements with other members to borrow and lend library materials, including the West Bend

Map 15

LOCATION OF POTENTIAL HISTORIC PLACES IN THE KEWASKUM PLANNING AREA: 1993

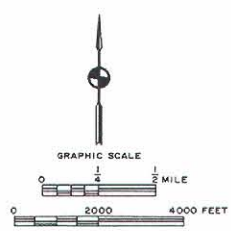


LEGEND

- POTENTIAL HISTORIC SITE LOCATION
- 33 IDENTIFICATION NUMBER

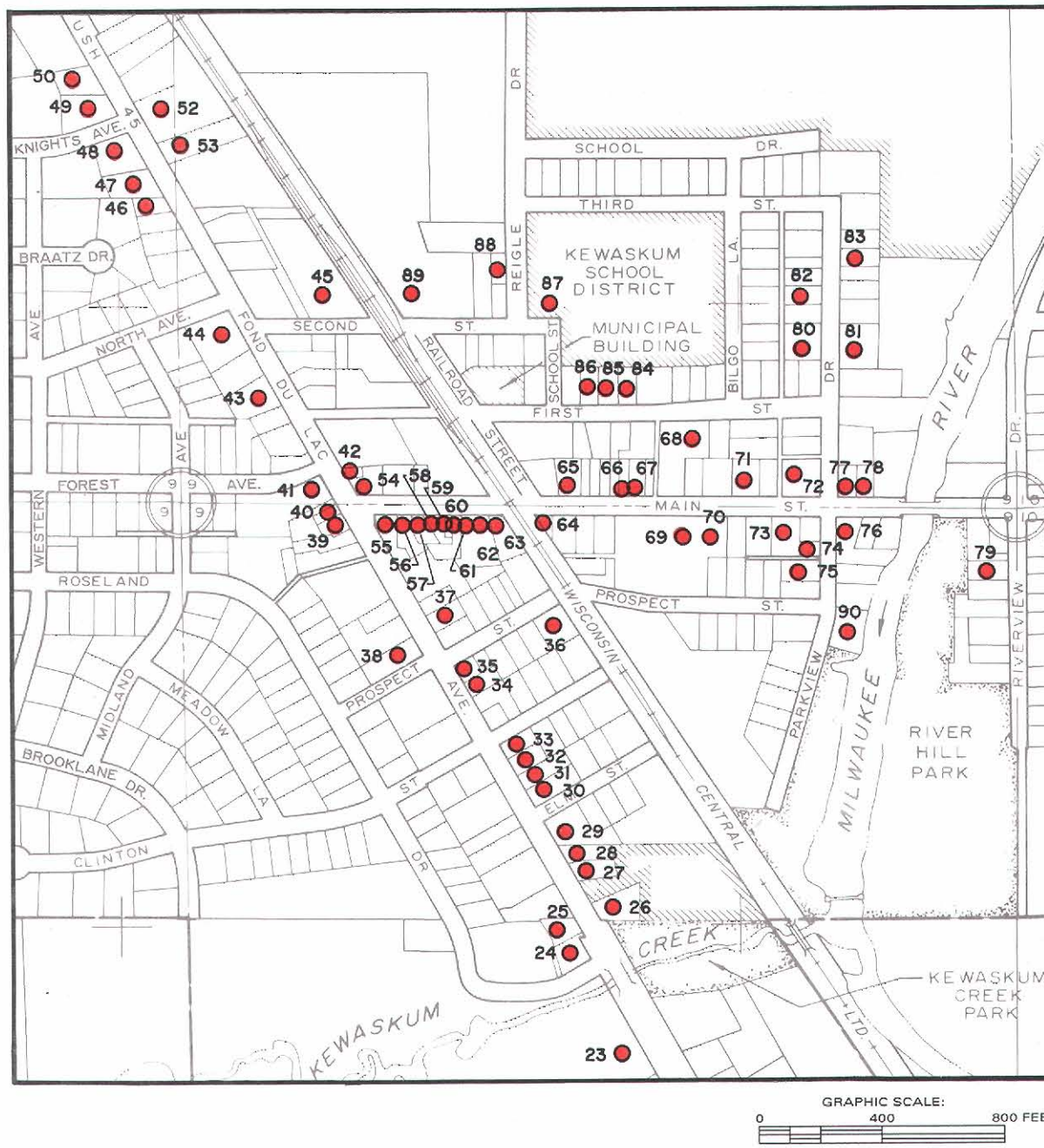
POTENTIAL HISTORIC PLACES - HISTORIC USES

1. 8960 TOWN LINE RD. - RESIDENCE
2. 8988 TOWN LINE RD. - RESIDENCE
3. 4895 S.T.H. 28 - CHEESE FACTORY/RESIDENCE
4. 9592 TOWN LINE RD. - RESIDENCE
5. 4810 S.T.H. 28 - RESIDENCE
6. 4801 S.T.H. 28 - MUCKERHEIDE HOUSE
7. 4507 S.T.H. 28 - SCHOOLHOUSE
8. 9323 HIGHLAND DR. - RESIDENCE
9. 4358 S.T.H. 28 - RESIDENCE
10. 4324 C.T.H. "H" - RESIDENCE
11. 4265 C.T.H. "H" - RESIDENCE
12. 8493 HIGHLAND DR. - OUTBUILDING
13. 8490 KETTLEVIEW DR. - RESIDENCE/OUTBUILDING
14. 3878 RIDGE RD. - RESIDENCE
15. 3871 BADGER RD. - STONY RIDGE/RESIDENCE
16. 3824 BADGER RD. - RESIDENCE
17. 8498 PROSPECT DR. - RESIDENCE
18. 9523 FOREST VIEW RD. - OUTBUILDING
19. 3620 E. MORAINE DR. - RESIDENCE
20. 9325 C.T.H. "S" - RESIDENCE
21. 9376 OLD FOND DU LAC RD. - OTTO BACKHAUS HOUSE
22. 1684 RIVERVIEW DR. - RESIDENCE
23. 1085 FOND DU LAC AV. - RESIDENCE
24. 1089 FOND DU LAC AV. - RESIDENCE
25. 1107 FOND DU LAC AV. - RESIDENCE
26. 1102 FOND DU LAC AV. - RESIDENCE
27. 1112 FOND DU LAC AV. - RESIDENCE
28. 1118 FOND DU LAC AV. - RESIDENCE
29. 1126 FOND DU LAC AV. - RESIDENCE
30. 1136 FOND DU LAC AV. - RESIDENCE
31. 1140 FOND DU LAC AV. - RESIDENCE
32. 1146 FOND DU LAC AV. - RESIDENCE
33. 1152 FOND DU LAC AV. - RESIDENCE
34. 1212 FOND DU LAC AV. - RESIDENCE
35. 1218 FOND DU LAC AV. - RESIDENCE
36. 131 PROSPECT ST. - J. M. MUELLER HOUSE
37. 1230 FOND DU LAC AV. - KEWASKUM LODGE/TEMPLAR HALL
38. 1227 FOND DU LAC AV. - RESIDENCE
39. 1263 FOND DU LAC AV. - COMMERCIAL
40. 1273 FOND DU LAC AV. - COMMERCIAL
41. 1277 FOND DU LAC AV. - ROSENHEIMER'S DEPARTMENT STORE
42. 1304 FOND DU LAC AV. - COMMERCIAL
43. 1407 FOND DU LAC AV. - RESIDENCE
44. 1421 FOND DU LAC AV. - RESIDENCE
45. 100 SECOND ST. - COMMERCIAL
46. 1535 FOND DU LAC AV. - RESIDENCE
47. 1541 FOND DU LAC AV. - RESIDENCE
48. 1551 FOND DU LAC AV. - RESIDENCE
49. 1607 FOND DU LAC AV. - RESIDENCE
50. 1615 FOND DU LAC AV. - RESIDENCE
51. 1731 FOND DU LAC AV. - RESIDENCE
52. 1554 FOND DU LAC AV. - DR. HAUSMANN HOUSE
53. 1546 FOND DU LAC AV. - RESIDENCE
54. 104 MAIN ST. - AMERICAN HOUSE HOTEL
55. 109 MAIN ST. - REPUBLICAN HOUSE HOTEL
56. 113-115 MAIN ST. - COMMERCIAL/RESIDENCE
57. 119 MAIN ST. - RESIDENCE
58. 127 MAIN ST. - RESIDENCE
59. 129 MAIN ST. - COMMERCIAL
60. 131 MAIN ST. - COMMERCIAL
61. 133 MAIN ST. - COMMERCIAL
62. 137 MAIN ST. - COMMERCIAL
63. 143 MAIN ST. - COMMERCIAL
64. 203 MAIN ST. - OLD VILLAGE HALL
65. 212 MAIN ST. - COMMERCIAL
66. 236 MAIN ST. - COMMERCIAL
67. 242 MAIN ST. - FRANK FELIX BUILDING
68. 343 FIRST ST. - PEACE UNITED CHURCH OF CHRIST
69. 331 MAIN ST. - HOLY TRINITY CATHOLIC CHURCH
70. 331 MAIN ST. - HOLY TRINITY RECTORY
71. 336 MAIN ST. - MILLER'S STUDIO
72. 364 MAIN ST. - RESIDENCE
73. 355-357 MAIN ST. - A. G. KOCH'S STORE/OLD POST OFFICE
74. 1217 PARKVIEW DR. - JOHN SCHAEFER OVERLAND AUTO DEALERSHIP
75. 1207-1209 PARKVIEW DR. - RESIDENCE
76. 401 MAIN ST. - RESIDENCE
77. 402 MAIN ST. - HERMAN KROHN TAILOR & BARBER SHOP
78. 410 MAIN ST. - RESIDENCE
79. 1209 RIVERVIEW DR. - RESIDENCE
80. 1417 PARKVIEW DR. - ST. LUCAS EVANGELICAL LUTHERAN CHURCH
81. 1420 PARKVIEW DR. - ST. LUCAS RECTORY
82. 1433 PARKVIEW DR. - RESIDENCE
83. 1444 PARKVIEW DR. - RESIDENCE
84. 320 FIRST ST. - RESIDENCE
85. 308 FIRST ST. - RESIDENCE
86. 300 FIRST ST. - RESIDENCE
87. 1550 REIGLE DR. - KEWASKUM ELEMENTARY SCHOOL-SOUTH WING
88. REIGLE DR. - KEWASKUM WATERWORKS-PUMPHOUSE NO. 1
89. 200 BLOCK SECOND ST. - KEWASKUM ALUMINUM COMPANY
90. 1200 PARKVIEW DR. - LOG CABIN/RESIDENCE



Source: State Historical Society of Wisconsin, Village of Kewaskum, and SEWRPC.

Inset to Map 15



Community Memorial Library, Hartford Public Library, Slinger Community Library, and Duerrwaechter Memorial Library in Germantown.

Police-Protection Services

The Village Police Department, also located in the Municipal Building, was manned by five full-time officers in 1993. The Department provides 24-hour protection service and serves as the parent organization for the Kewaskum Auxiliary Police, which consists of 16 volunteers who provide assistance to the Department and numerous civic and service organizations of the community. The Department occupies approximately 1,650 square feet of the Municipal Building, excluding garage space. As already noted, additional space could be available for accommodating additional police protective services upon the possible relocation of the library and the community room to a different building.

Fire-Protection Services

The Village Fire Department was located in the present Municipal Building until 1975. The Fire Department was relocated to the new Kewaskum Fire Station, which occupies an approximately 13,776-square-foot building on approximately 2.3 acres of land at 1106 Fond du Lac Avenue (USH 45). In 1993, the Station was manned by a 45-member volunteer force that serves the Village and Town of Kewaskum and part of the Town of Auburn in Fond du Lac County. In addition, the Village Fire Department is the parent organization of the Volunteer Rescue Squad, which provides 24-hour emergency rescue service to the Kewaskum area. The Village Fire Department has reciprocal service agreements with surrounding communities for additional fire-protection services if needed.

Rating of Fire-Protection Services: The adequacy of Village fire protection is evaluated by the Insurance Services Office, which uses a grading schedule for municipal fire protection. The schedule provides criteria to be used in rating the fire defenses and physical conditions of municipalities. Ratings obtained under the schedule are used throughout the United States in establishing base rates for fire insurance. While the Insurance Services Office does not presume to dictate the level of fire-protection services that should be provided by any municipality, reports of its surveys generally contain recommendations for correcting any serious deficiencies and, over the years, have been accepted as guides by many municipal officials in planning improvements to fire-fighting services.

The ratings assigned by the Office are based on analyses of fire department equipment, alarm systems, water supply, fire-prevention programs, building construction, and distance of the fire station from such potential hazard areas as the central business district. In rating a community, total deficiency points in the several areas of evaluation are used to assign a numerical rating of from one to 10, with one indicating the best protection and 10 representing an essentially unprotected community. Class nine usually indicates a community without effective public water supply and hydrants, while higher categories have such facilities.

In 1993, the areas within the Village served by public water supply hydrants were rated Class 5; those areas within the planning area outside of the Village not served by hydrants were rated Class 9.

PUBLIC UTILITIES

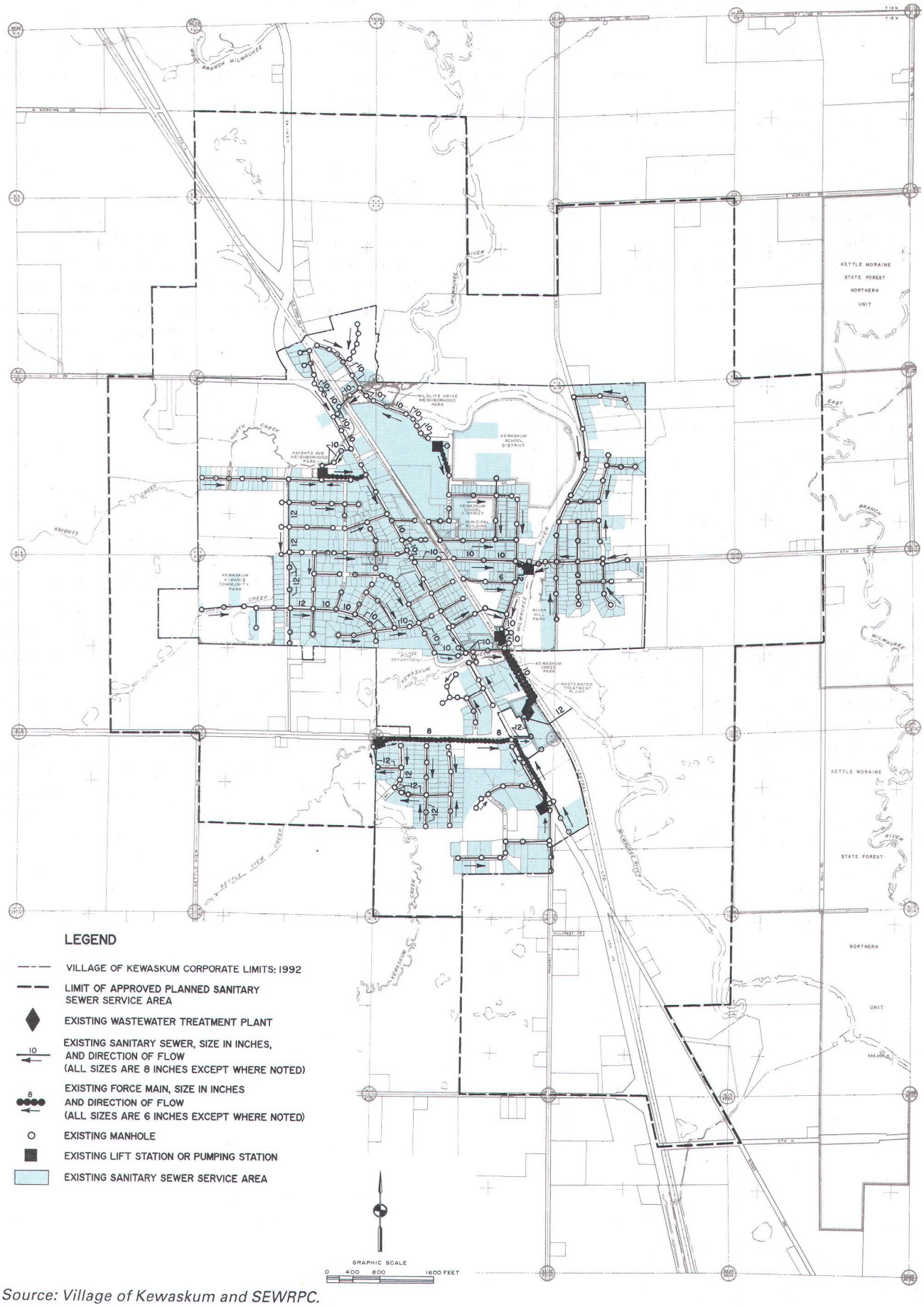
Public utility systems are important influences on community growth and development. Urban development today is highly dependent on these utility systems, which provide the individual user with power, light, communication, heat, water, and sanitary sewer service. Moreover, certain utility facilities are closely linked to the surface water and groundwater resources of the area, and may, therefore, affect the overall quality of the natural resources. This is particularly true of sanitary sewerage, water-supply, and stormwater drainage facilities, which are in a sense modifications or extensions of the natural lake, stream, and watercourse system of the area and of the underlying groundwater reservoir. Knowledge of the location and capacities of these utilities is, therefore, essential to intelligent land use planning for both the Village and the planning area.

Sanitary Sewer Service

The existing sanitary sewer system and service area in the Village of Kewaskum are shown on Map 16. In 1993, the sanitary sewer service area totaled approximately 320 acres, or about 2 percent of the Kewaskum planning area and about 37 percent of the total area within the Village corporate limits. In 1993, an estimated 2,810 persons, or about 99 percent of the resident population of the Village and about 71 percent of the resident population of the planning area, were served by public sanitary sewer.

Map 16

EXISTING SANITARY SEWER SYSTEM AND SERVICE AREA IN THE VILLAGE OF KEWASKUM: 1993



Source: Village of Kewaskum and SEWRPC.

The planned sanitary sewer service area for the Village of Kewaskum and environs is described in the next chapter of this report and shown on Map 16. The Village of Kewaskum sewerage system consists of a sewage treatment plant, six lift stations, and a network of trunk, main, and lateral sewers. The Kewaskum sewage treatment plant, 1000 Fond du Lac Avenue (USH 45), is designed to treat an average daily flow of approximately 0.70 million gallons of wastewater per day. In 1993, the plant treated an average daily flow of approximately 0.51 million gallons of wastewater, or about 73 percent of the total treatment capacity of the plant. The treated wastewater was discharged to the Milwaukee River.

Public Water System

The existing public water-supply system and service area in the Village of Kewaskum are shown on Map 17. In 1993, the service area, which is identical to the sanitary sewer service area, totaled approximately 320 acres, or about 2 percent of the planning area and about 37 percent of the total area of the Village proper. In 1993, an estimated 2,810 persons, or about 99 percent of the resident population of the Village and 71 percent of the resident population of the planning area, were served by the public water-supply system.

Water is supplied by four wells and distributed by pumping stations, three in-ground reservoirs, and two elevated water towers. The total storage capacity of the in-ground reservoirs and the water towers is 0.60 million gallons. The pumping capacity of the entire system is about 1.98 million gallons per day, with an average daily consumption of about 0.56 million gallons, or about 28 percent of the total pumping capacity, in 1993.

Engineered Stormwater Drainage Facilities

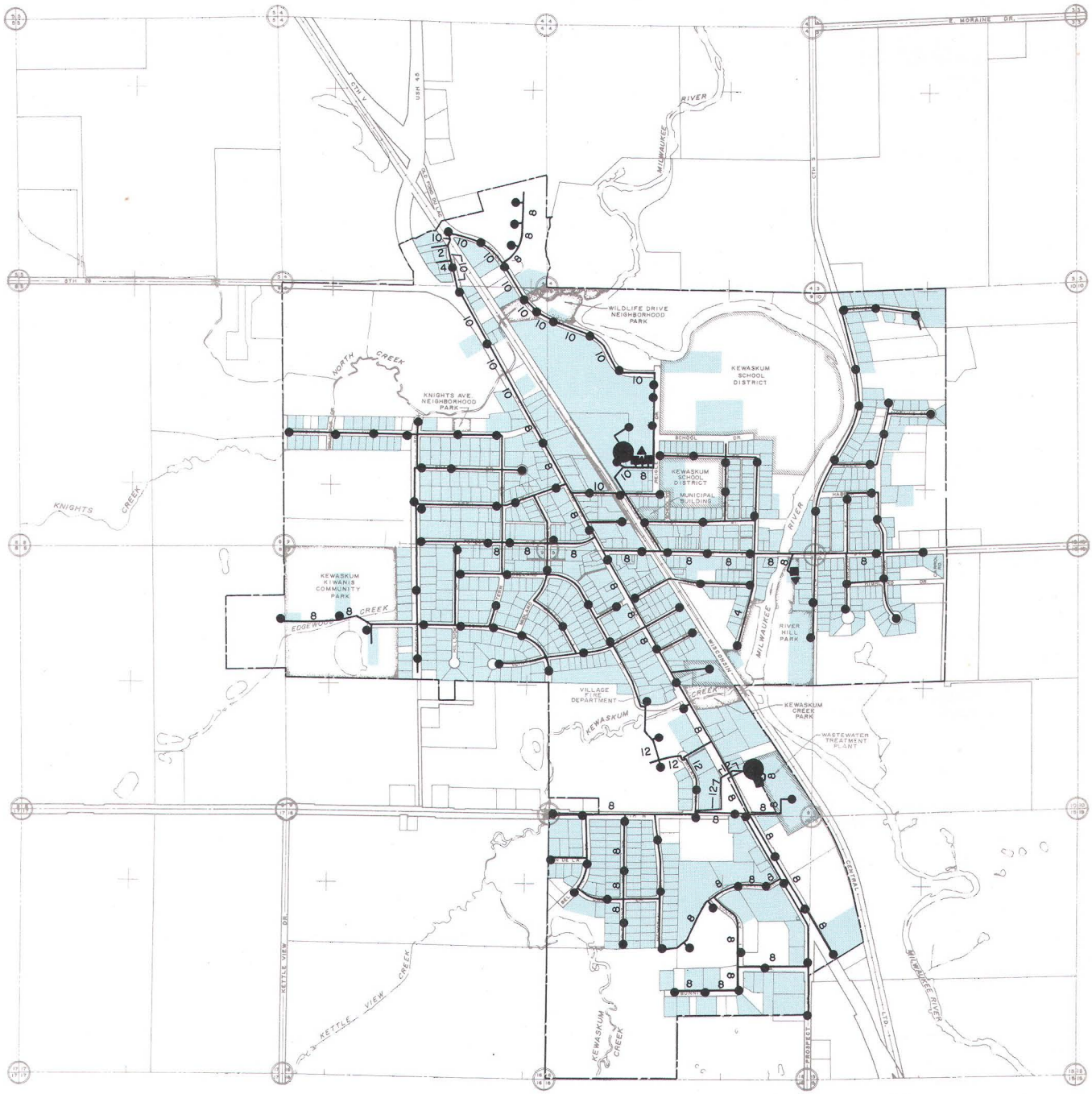
In 1993, Ruekert and Mielke, Inc., consulting engineers, completed an inventory of existing engineered stormwater facilities of the Village and immediate environs. Map 18 reflects the findings of this inventory. In 1993, most of the urban development in the Village was served by an engineered drainage system consisting primarily of storm sewers, but also including drainage ditches and natural watercourses. The inventory is essential to any future stormwater management studies that may be undertaken to determine improvements or expansions to existing facilities needed to accommodate runoff from present and future developments. Stormwater collected by the system is discharged into large wetlands, which act as stormwater detention and groundwater recharge areas, and into streams tributary to the Milwaukee River or directly to that River.

Solid Waste

Trash collected by a private contractor from residences and businesses in the Village of Kewaskum is disposed of in a landfill in the Horicon area. The Village recently began a curbside-pickup recycling program in which recyclable materials are also collected during regular weekly garbage collection days. Recyclable materials are taken to the aforereferenced landfill site, which contains a materials recovery facility. Yard waste, such as grass clippings, leaves, and garden waste, are taken to a disposal site at the Municipal Garage, 1002 Fond du Lac Avenue (USH 45). Brush and tree debris is chipped, collected, and stored in a pile at the Municipal Garage. The yard wastes accumulated on this site are then made available for use by the general public and private composters.

Map 17

EXISTING PUBLIC WATER SUPPLY SYSTEM AND SERVICE AREA IN THE VILLAGE OF KEWASKUM: 1993



LEGEND

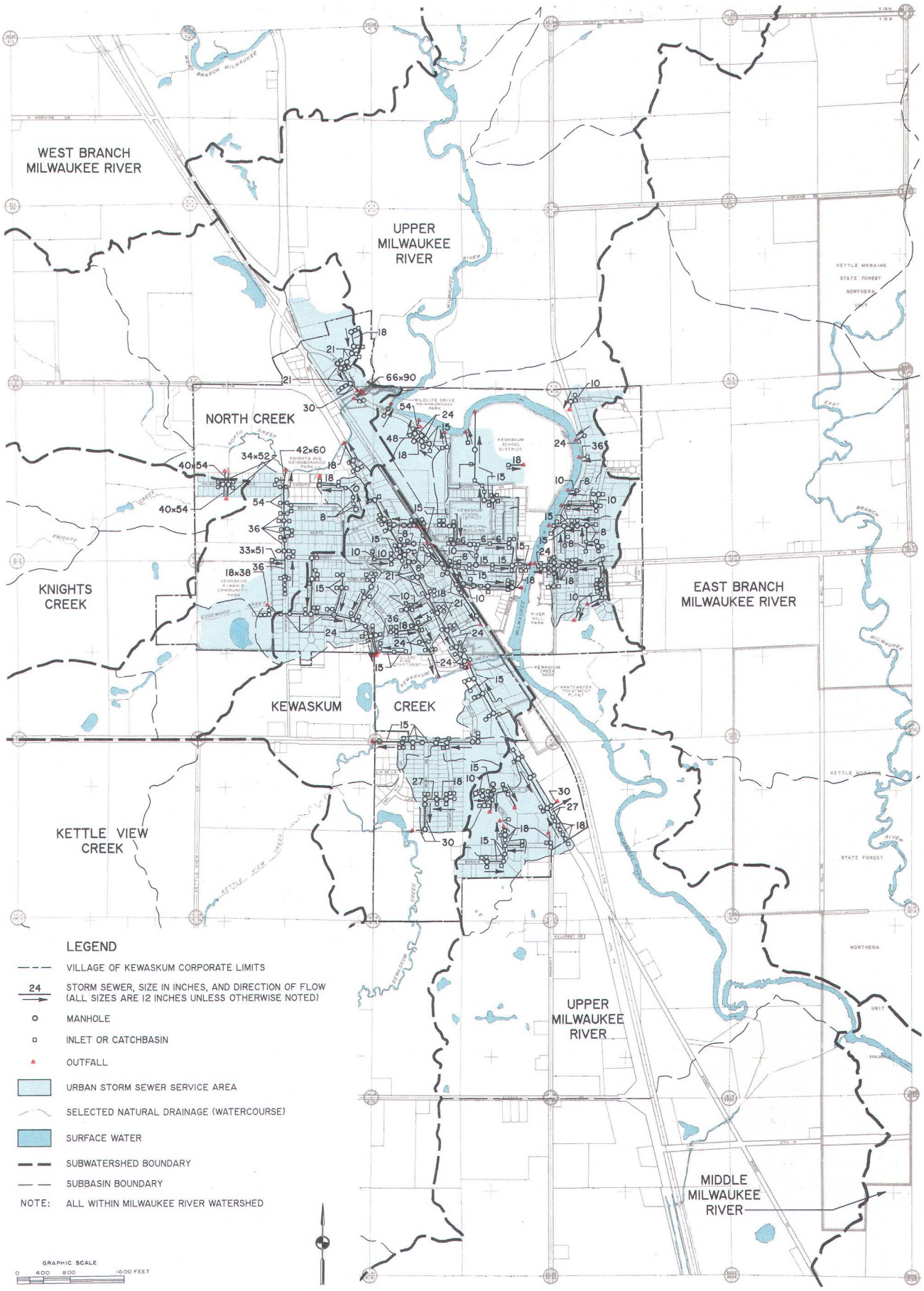
- VILLAGE OF KEWASKUM CORPORATE LIMITS: 1992
- EXISTING WATER TOWER
- EXISTING IN-GROUND RESERVOIR
- 8 — EXISTING WATER MAIN AND SIZE IN INCHES (ALL SIZES ARE 6 INCHES EXCEPT WHERE NOTED)
- EXISTING WELL AND PUMPING STATION
- EXISTING FIRE HYDRANT
- EXISTING WATER SUPPLY SERVICE AREA

GRAPHIC SCALE
0 400 800 1600 FEET

Source: Village of Kewaskum and SEWRPC.

Map 18

EXISTING STORMWATER SEWER SYSTEM AND SERVICE AREA IN THE VILLAGE OF KEWASKUM AND ENVIRONS: 1993



Source: Ruekert & Mielke, Inc., Village of Kewaskum, and SEWRPC.

Chapter V

PLANS AND LAND USE REGULATIONS

The land use and street system plans for the Village of Kewaskum are intended, in part, to reevaluate, amend, update, and extend adopted regional and local plans as those plans pertain to the planning area. In addition, the plans are to take into account local development objectives reflected in locally adopted land use control ordinances. Accordingly, an important step in the planning process was the assembling of information pertaining to the existing framework of regional and local plans, topographic and cadastral maps, and related land use regulations. This chapter presents, in summary form, the inventory findings with respect to these matters.

PLAN FRAMEWORKS

Sound planning practice dictates that local plans be prepared within the framework of adopted areawide plans. The Southeastern Wisconsin Regional Planning Commission (SEWRPC) is the official areawide planning agency for the seven-county Southeastern Wisconsin Region, which includes Washington County and the Village of Kewaskum and environs. Since its creation in 1960, the Commission, in cooperation with other government agencies and advisory committees, has prepared and adopted a number of regional plans which are intended to be used to help shape development within the Region in the public interest. While always advisory in nature to the government agencies concerned and to private-sector interests, this framework of regional plan elements is intended to serve as a basis for more detailed county and local government planning and is intended to influence both public and private sector decision making with respect to development matters. An understanding of pertinent recommendations contained in regional and local plans, as described below, is, therefore, important to the proper preparation of land use and street system plans for the Village of Kewaskum.

Regional Land Use Plan

The recently adopted regional land use plan as it pertains to the Kewaskum planning area is shown in graphic form on Map 19. The regional land use plan, as documented in SEWRPC Planning Report No. 40, A Regional Land Use Plan for Southeastern Wisconsin: 2010, January 1992, provides recommendations regarding the amount, spatial distribution, and general arrangement of the various land uses required to serve the needs of the existing and probable future resident population and economic activity levels within the Region. Particularly pertinent to the preparation of the development plans for the Kewaskum planning area are the recommendations for the preservation of the primary environmental corridors and prime agricultural lands of the Region and for the encouragement of a more compact pattern of urban development. The regional plan recommends that urban development be encouraged to occur only in those areas of the Region which are covered by soils suitable for such use, which are not subject to such hazards as flooding, and which can be readily served by such essential urban facilities as public sanitary sewerage and water supply. These important recommendations of the regional land use plan elements provided the basic framework on which the recommended development plans for the Kewaskum planning area were developed.

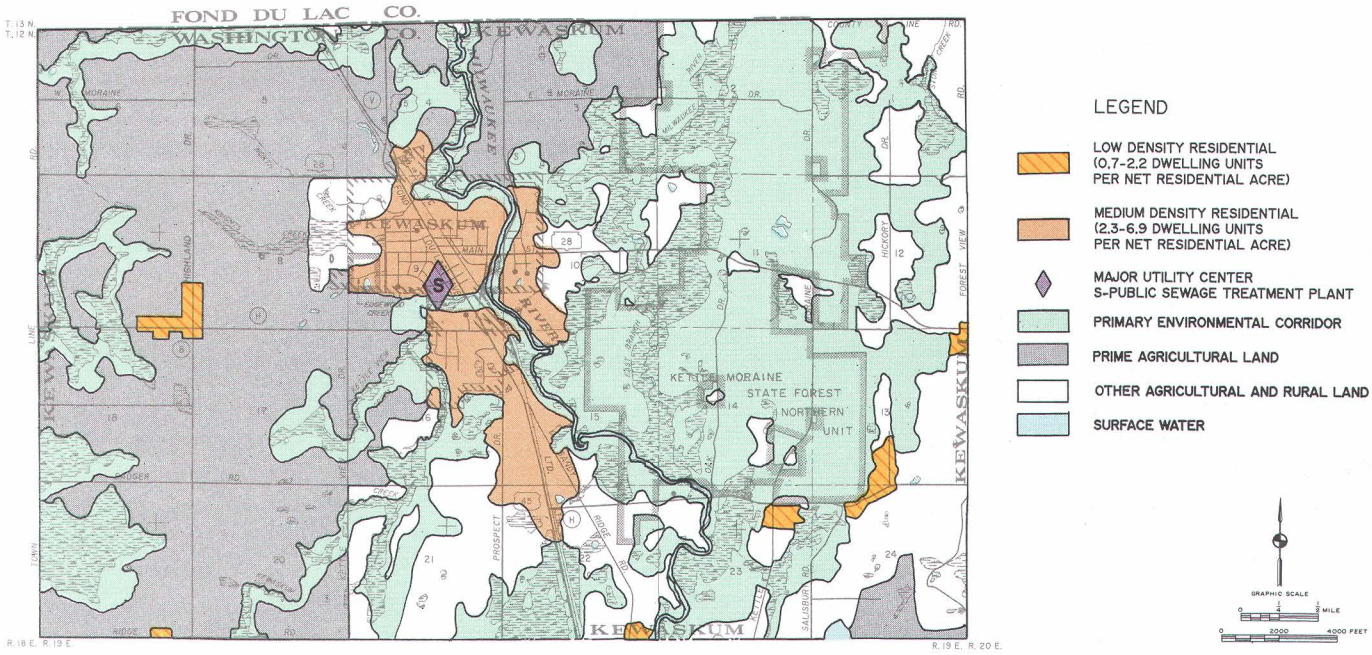
Transportation System Plans

The adopted regional transportation system plan, presented in SEWRPC Planning Report No. 41, A Regional Transportation Plan for Southeastern Wisconsin: 2010, December 1994, provides recommendations as to how the regional land use plan can best be served by highway and transit facilities. It recommends a functional and jurisdictional system of arterial streets and highways to serve the Region through the design year 2010, together with a functional network of various types of transit lines. The regional transportation system plan was developed on the basis of careful quantitative analyses of existing and probable future traffic movements and of existing highway and transit system capacity and use. The adopted regional transportation plan, as it pertains to the Kewaskum area, is shown on Map 20.

The adopted regional bicycle and pedestrian facilities system plan, presented in SEWRPC Planning Report No. 43, A Regional Bicycle and Pedestrian Facilities System Plan for Southeastern Wisconsin: 2010, December 1994, provides recommendations to encourage increased bicycle and pedestrian travel as alternatives to travel by automobile in the Region in a safe and efficient manner. The plan includes a proposed regional bicycle-way system designed to provide connections between urbanized areas and

Map 19

ADOPTED REGIONAL LAND USE PLAN AS RELATED TO THE KEWASKUM PLANNING AREA: 2010



Source: SEWRPC.

incorporated areas with populations of 5,000 or more located outside urbanized areas. Map 21 portrays the adopted regional bicycle-way system plan as related to the Kewaskum planning area.

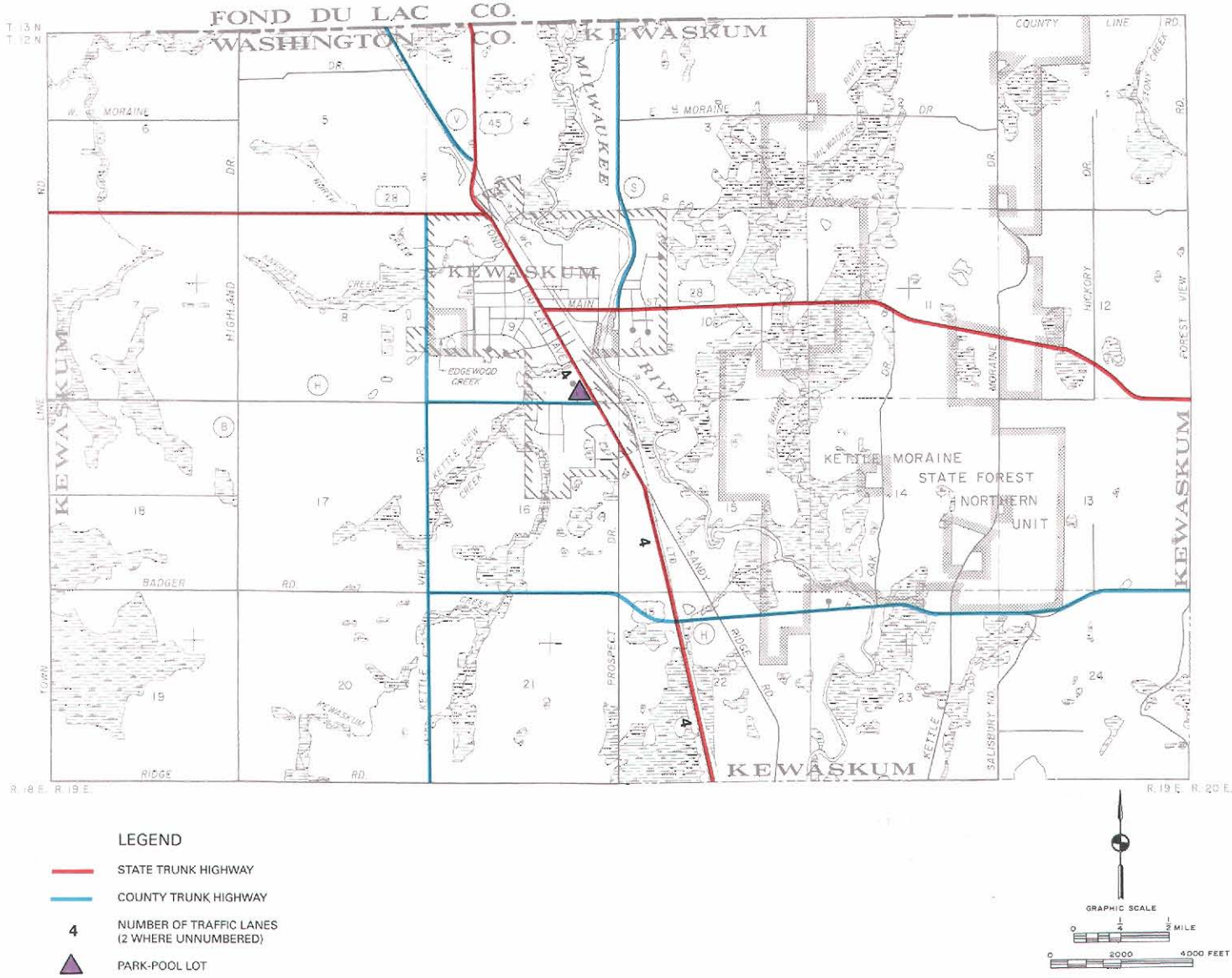
Park and Open Space Plans

The adopted regional park, outdoor recreation, and related open space plan, as described in SEWRPC Planning Report No. 27, A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000, November 1977, identifies existing and probable future park and open space needs within the Region and recommends a system of large regional resource-oriented parks, recreational corridors, and smaller urban parks, together with attendant recreational facilities, to meet these needs. The portion of the Regional Plan which applies to Washington County, including the Kewaskum planning area, was revised in 1989 by the Regional Planning Commission in response to a request from the Washington County Board. The resulting park and open space plan for the County is documented in SEWRPC Community Assistance Planning Report No. 136, A Park and Open Space Plan for Washington County, March 1989. In addition to recommending park and open space sites and the preservation of environmentally sensitive lands and prime agricultural lands, the plan also proposes major recreation corridors with trail-oriented facilities, including the planned Ice Age National Scenic Trail and a proposed 57-mile Washington County Bicycle Trail. The recommended park and open space plan and related trails for the County as they pertain to the Kewaskum planning area are depicted on Map 22.

The Wisconsin Department of Natural Resources completed a master plan to guide management, for the next ten years, of the Kettle Moraine State Forest, consisting of four units: Northern, Southern, Loew's Lake, and Lapham Peak. This planning effort includes a separate master plan for the Kettle Moraine State Forest—Northern Unit, a portion of which lies within Washington County and the Kewaskum planning area. This plan is documented in a report titled Kettle Moraine State Forest—Northern Unit Master Plan, September 1991. The major proposals in this plan document include land acquisitions, improvements to wildlife and vegetation areas, construction and management of recreation facilities, identification of potential significant natural areas of State importance, and promotion of educational services. Proposed land acquisitions in the next ten years in the Kewaskum planning area include approximately 525 acres, mostly of wetlands, adjacent to the current park boundaries. The plan also recommends allowing

Map 20

ADOPTED REGIONAL TRANSPORTATION SYSTEM PLAN AS RELATED TO THE KEWASKUM PLANNING AREA: 2010



Source: SEWRPC.

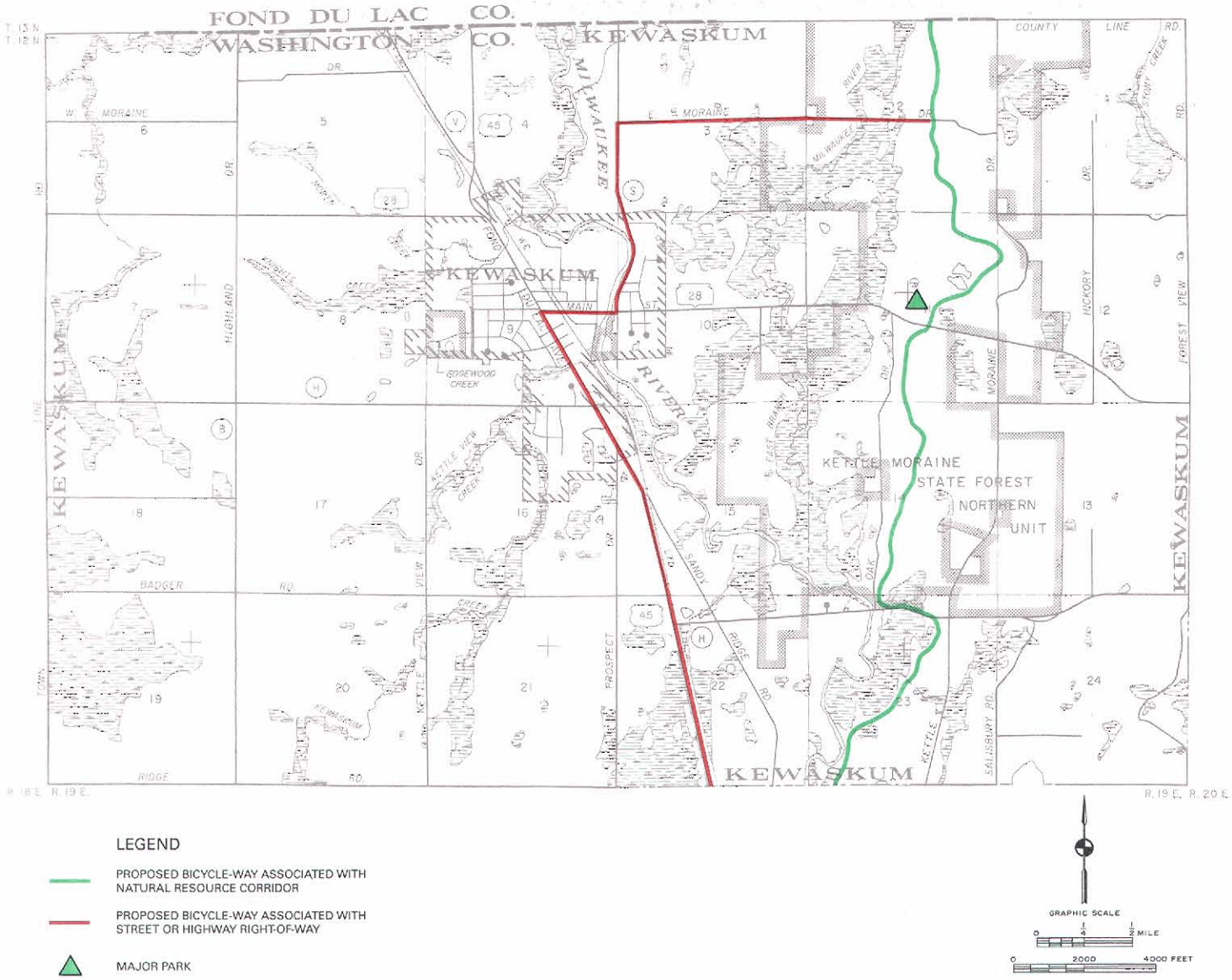
multiple uses of some snowmobile access trails from nearby communities, such as the Village of Kewaskum, during the nonwinter season to provide a connection between the communities and the forest trail networks for hikers and equestrians. These recommendations were considered during the preparation of the development plans for the Village of Kewaskum.

Water Quality and Related Plans

The regional water quality management plan is intended to provide recommendations to help meet a Congressional mandate that the waters of the United States be made, to the extent practical, "fishable and swimmable." The findings and recommendations of the water quality management planning program for Southeastern Wisconsin are described in SEWRPC Planning Report No. 30, A Regional Water Quality Management Plan for Southeastern Wisconsin: 2000, Volume One, Inventory Findings, September 1978; Volume Two, Alternative Plans, February 1979; and Volume Three, Recommended Plan, June 1979. The plan documented in this report consists of a land use

Map 21

ADOPTED REGIONAL BICYCLE-WAY SYSTEM PLAN AS RELATED TO THE KEWASKUM PLANNING AREA: 2010



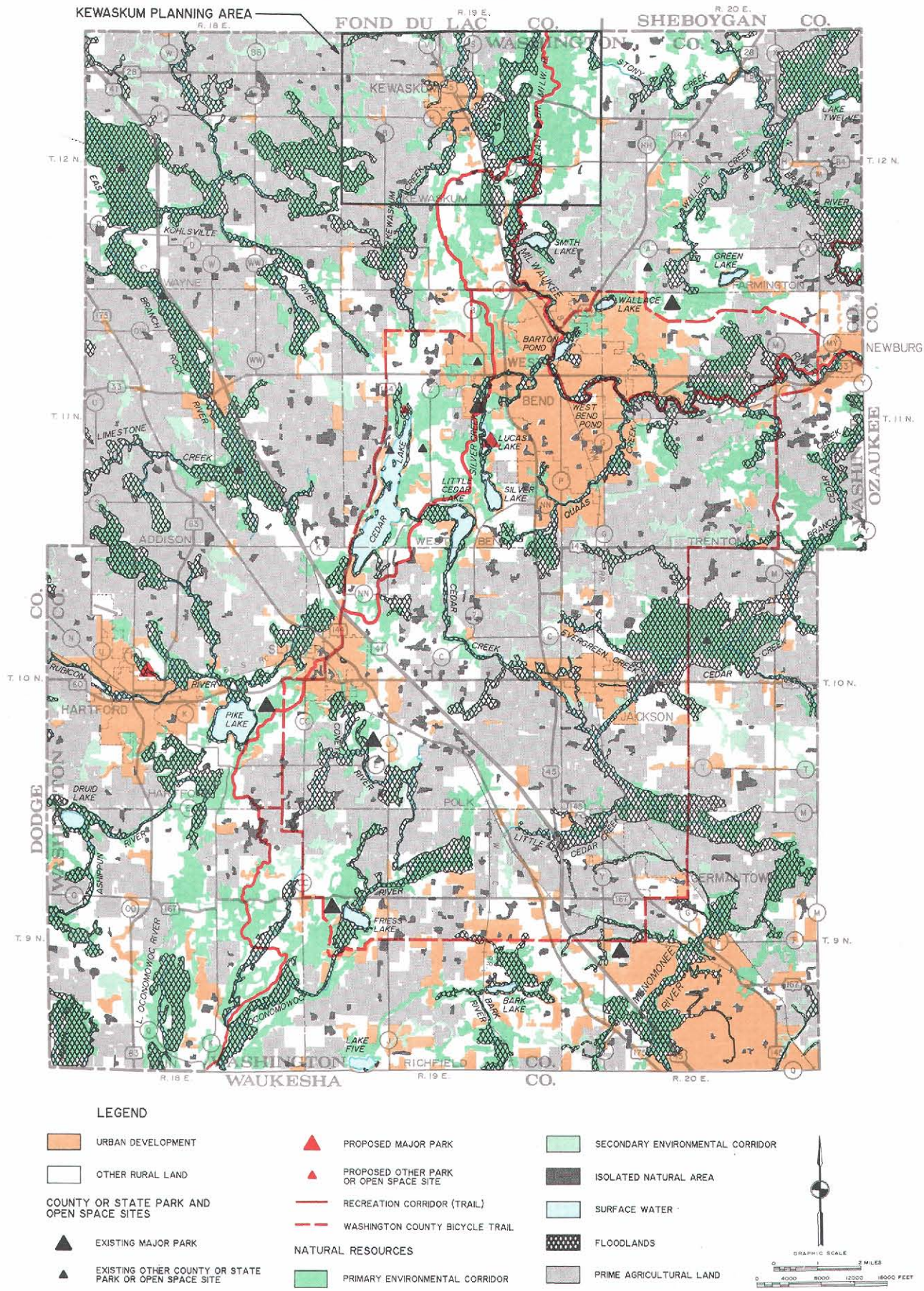
Source: SEWRPC.

and sanitary sewer service area element, a point source water pollution abatement element, a non-point source water pollution abatement element, a wastewater sludge management element, and a water quality monitoring element. The adopted regional water quality management plan includes recommended sanitary sewer service areas attendant to each recommended sewage treatment facility in the Region. These initially recommended sanitary sewer service areas were based upon the urban land use configuration identified in the regional land use plan for the year 2000. As such, delineation of the areas was necessarily general and did not reflect detailed local planning considerations. Accordingly, the plan recommends that each community served by public sanitary sewerage facilities refine and detail sanitary sewer service areas for their area. The areawide water quality management plan is currently being updated to reflect, in part, such local planning efforts and the urban land use patterns recommended in the recently adopted 2010 regional land use plan.

The delineation of a sanitary sewer service area for the Village of Kewaskum and environs was based, in part, upon the regional water quality management

Map 22

ADOPTED WASHINGTON COUNTY PARK AND OPEN SPACE PLAN AS RELATED TO THE KEWASKUM PLANNING AREA



Source: SEWRPC.

plan and the Milwaukee River watershed plan, which is documented in SEWRPC Planning Report No. 13, A Comprehensive Plan for the Milwaukee River Watershed, Volume One, Inventory Findings and Forecasts, December 1970, and Volume Two, Alternative Plans and Recommended Plan, October 1971. This subregional plan also contains recommendations for floodland management, water pollution abatement, and water supply which apply to the Kewaskum planning area. Particularly important for the Village of Kewaskum is the recommendation to preserve floodwater storage areas in the watershed's headwaters in order to avoid major increases in flood flows within the Milwaukee River through Kewaskum.

As noted earlier, the Regional Planning Commission, in adopting the areawide water quality management plan, recommended that steps be taken to further refine and detail sanitary sewer service areas in cooperation with the local units of government affected. In response to this recommendation, the Village of Kewaskum on February 29, 1988, adopted a refined sanitary sewer service plan designating a detailed sanitary sewer service area tributary to the Village of Kewaskum Wastewater Treatment Plant. This plan is shown on Map 23 and documented in SEWRPC Community Assistance Planning Report No. 128, entitled, Sanitary Sewer Service Area for the Village of Kewaskum, March 1988.

Agricultural Preservation Plans

In 1981, the Washington County Board adopted a farmland preservation plan prepared by Stockham & Vandewalle of Madison, Wisconsin, documented in a report titled Farmland Preservation Plan, Washington County, Wisconsin. The plan is intended to serve as a guide to the preservation of agricultural lands in Washington County. This plan was prepared partly in response to the increasing public concern over the rapid conversion of farmland to urban use and to the requirements of the State "Farmland Preservation Act." The Wisconsin Legislature adopted this Act in 1977 to encourage the preparation of county farmland preservation plans and to provide State income-tax credits for the maintenance of farmlands in delineated preservation areas. Ultimately, only those farmers owning lands within delineated prime agricultural areas zoned for exclusive agricultural use, and, in Southeastern Wisconsin, in an area for which a farmland preservation plan has been prepared, as in this case, are eligible for the full State income-tax credits provided under the law. The County plan further recommends the protection of environmentally significant areas and makes recommendations regarding the location and intensity of urban development within the County through the year 2000. The plan also presents recommendations for implementation of the farmland preservation plan. The Washington County farmland preservation plan as it pertains to the Kewaskum planning area is shown on Map 24.

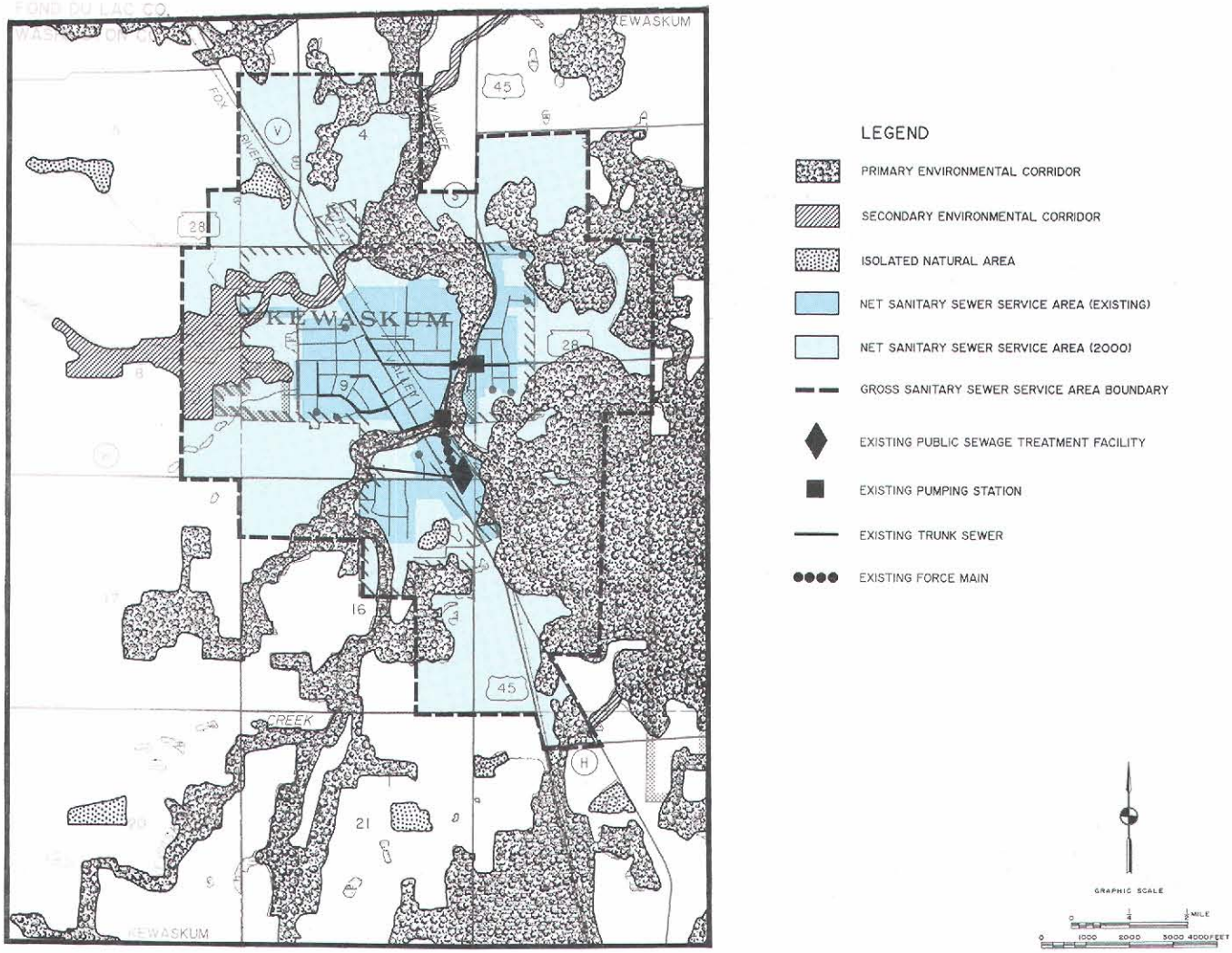
In 1985, the Washington County Board requested the Regional Planning Commission to assist in preparing a plan to help abate cropland soil erosion and to comply with the erosion control planning requirements of Section 92.10 of the Wisconsin Statutes. The resulting plan is documented in SEWRPC Community Assistance Planning Report No. 170, Washington County Agricultural Soil Erosion Control Plan, March 1989. As part of the planning process, agricultural soil erosion control problems were identified and erosion control priority ratings were developed for each U. S. Public Land Survey section in the County. The plan describes such available soil erosion control practices as conservation tillage, contouring, terraces, and permanent vegetative cover, identifying farm conservation planning activities needed to implement the recommended control practices.

Economic Development Plan

In 1984, the Washington County Board requested that the Regional Planning Commission prepare an overall economic development program for Washington County. This plan is documented in SEWRPC Community Assistance Planning Report No. 117, Washington County Overall Economic Development Program Plan, December 1985. The decision by the County Board to prepare such a plan was based, in part, upon a determination by the U. S. Department of Commerce, Economic Development Administration (EDA), that the County was qualified for designation as a "redevelopment area" under the Federal Public Works and Economic Development Act of 1965. Such designation would make the County and the local units of government within the County eligible to apply for Federal grants to support public works and other facility development which would result in the creation of permanent jobs. In addition, the designation of the County as a redevelopment area would enable private businesses to apply to the EDA through local financial institutions for business loan guarantees. The plan identifies historic economic development and related activities in the County; inventories and analyzes the economic development-related physical, social, and economic characteristics of the County; identifies economic development potentials and con-

Map 23

ADOPTED SANITARY SEWER SERVICE AREA PLAN FOR THE VILLAGE OF KEWASKUM AND ENVIRONS: 2000



Source: SEWRPC.

straints within the County; and identifies the initial elements of an economic development program designed to help improve economic conditions in the County.

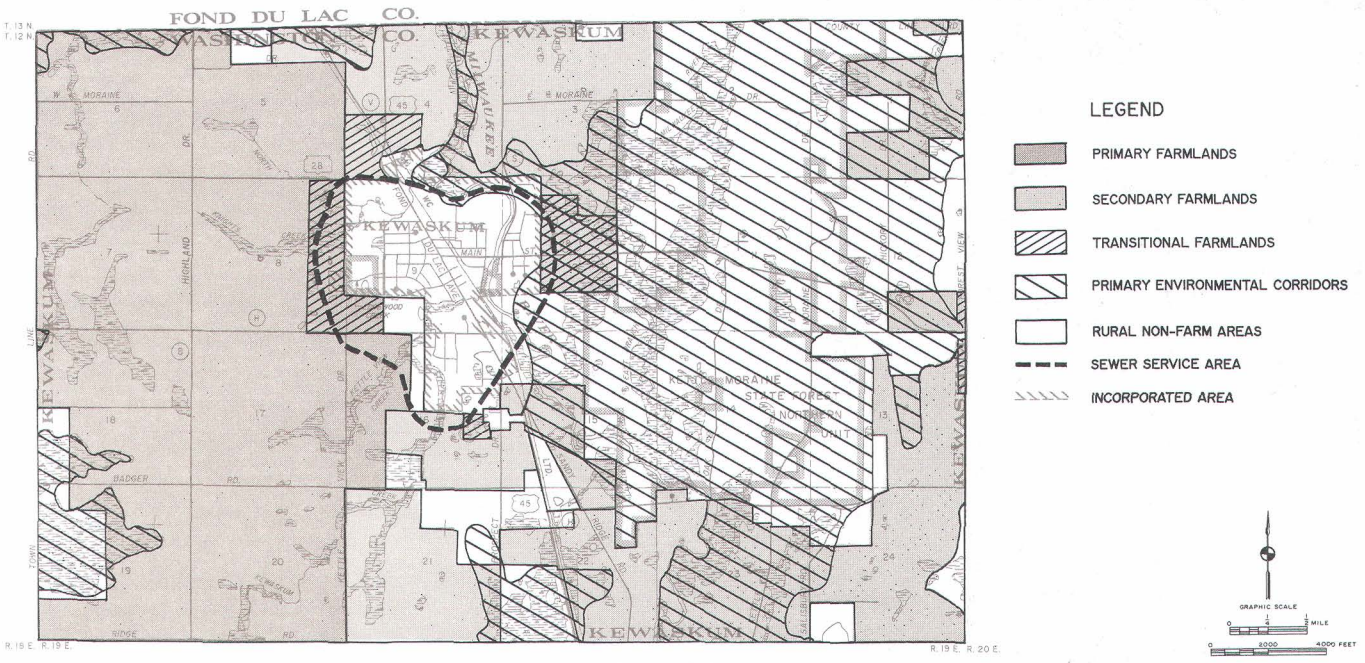
As noted, the findings and recommendations of these regional, subregional, and County plan elements all have important implications for any comprehensive planning effort for the Village of Kewaskum and environs. Pertinent recommendations from these earlier planning efforts are reflected in the land use and street system plans presented in this document.

TOPOGRAPHIC AND CADASTRAL MAPS

Good, large scale, topographic and cadastral maps were essential to the preparation of the development plans for the Kewaskum planning area. Maps with two-foot contour intervals were prepared in a joint County and Village project by quarter-section in 1994 to the Regional Planning Commission specifications at a scale of one inch equals 200 feet. These topographic maps cover a 12-square mile area consisting of the Village of Kewaskum and contiguous areas of the Town of Kewaskum. More specifically, the area mapped consists of U. S. Public

Map 24

ADOPTED WASHINGTON COUNTY FARMLAND PRESERVATION PLAN AS RELATED TO THE KEWASKUM PLANNING AREA



Source: Stockham & Vandewalle and SEWRPC.

Land Survey Section 3 through 5, 8 through 10, 15 through 17, and 20 through 22, Township 12 North, Range 19 East. A cadastral map showing existing property lines and street and railroad rights-of-way in the Village and its immediate environs on December 1, 1992, was prepared by the Regional Planning Commission for use in preparing the development plans here reported, using information supplied by the Village and other sources. This map covers the same area as those areas covered by the aforementioned topographic maps.

LAND USE REGULATIONS

Good planning practice notwithstanding, local development objectives are often expressed most forcefully, and sometimes solely, in local land use control ordinances. The existing regulations which require examination in this respect include the local zoning ordinances, land division ordinances, and an official map in effect within the Kewaskum planning area. The following presents in summary form the inventory land use controls conducted under the Village planning program.

Zoning

Good development depends, not only on sound, long-range plan formulation at all levels of government, but on practical plan implementation as well. Zoning is one of the major plan implementation devices available to any community. The primary function of zoning should be to implement the community's land use plan. A secondary function of zoning should be to protect desirable existing. Zoning should be a major tool for the implementation of community plans and not a substitute for such plans. A zoning ordinance is a public law which regulates and restricts the use of private property in the public interest. Zoning seeks to confine certain land uses to those areas of the community which are best suited to those uses and seeks to set aside land for these particular uses, thereby encouraging the most appropriate use of land throughout the community. Zoning seeks to assure adequate light, air, and open space for each building and to avoid overcrowding, traffic congestion, and both the overloading and the underuse of utility systems. Zoning should also be designed to protect and preserve the natural resource base.

A single set of regulations applying to the entire community could not achieve these zoning objectives, since different areas of the community differ in character and function. Accordingly, a zoning ordinance consists of two parts: 1) a map delineating the boundaries of various zoning districts and 2) a text setting forth regulations that apply to each of the various zoning districts, together with related procedural, administrative, and legal provisions. The zoning ordinance text includes both "use" and "bulk" regulations for each district. Use regulations specify the type of buildings and land uses that can occupy land in a given district, including principal permitted uses; conditional uses, which require review and approval by the Plan Commission; and accessory uses, which are permitted if they are incidental to a principal use. Bulk regulations specify minimum lot sizes, maximum buildings heights, building setbacks from property lines, and similar details.

Zoning ordinances commonly contain a number different zoning districts, including, for example, single-, two-, and multi-family residential districts; business and industrial districts; and conservancy districts. The zoning ordinance lists specific regulations that apply within each district. In this respect the zoning ordinance differs from building, housing, and sanitation codes, which, in general, apply uniformly to all lands or buildings of like use wherever they may be located in a community. Zoning regulations, however, for different types of districts may be different, but regulations within any given district must be uniform regardless of where properties of the same zoning classification are located in the community.

Wisconsin enabling legislation requires that zoning regulations shall be formulated and applied in accordance with a "comprehensive plan." There are a number of different interpretations of the meaning of the term "comprehensive plan" in this context. These vary from the idea that, to be deemed in accordance with a comprehensive plan, zoning must regulate land use, building height, and lot area; that zoning must be applied to the entire corporate limits of the community; that zoning must be based upon careful and comprehensive study prior to adoption; and that zoning must be based upon a documented long-range land use plan and must seek to implement that plan. The fourth concept is that which is the most commonly accepted by professional planners.

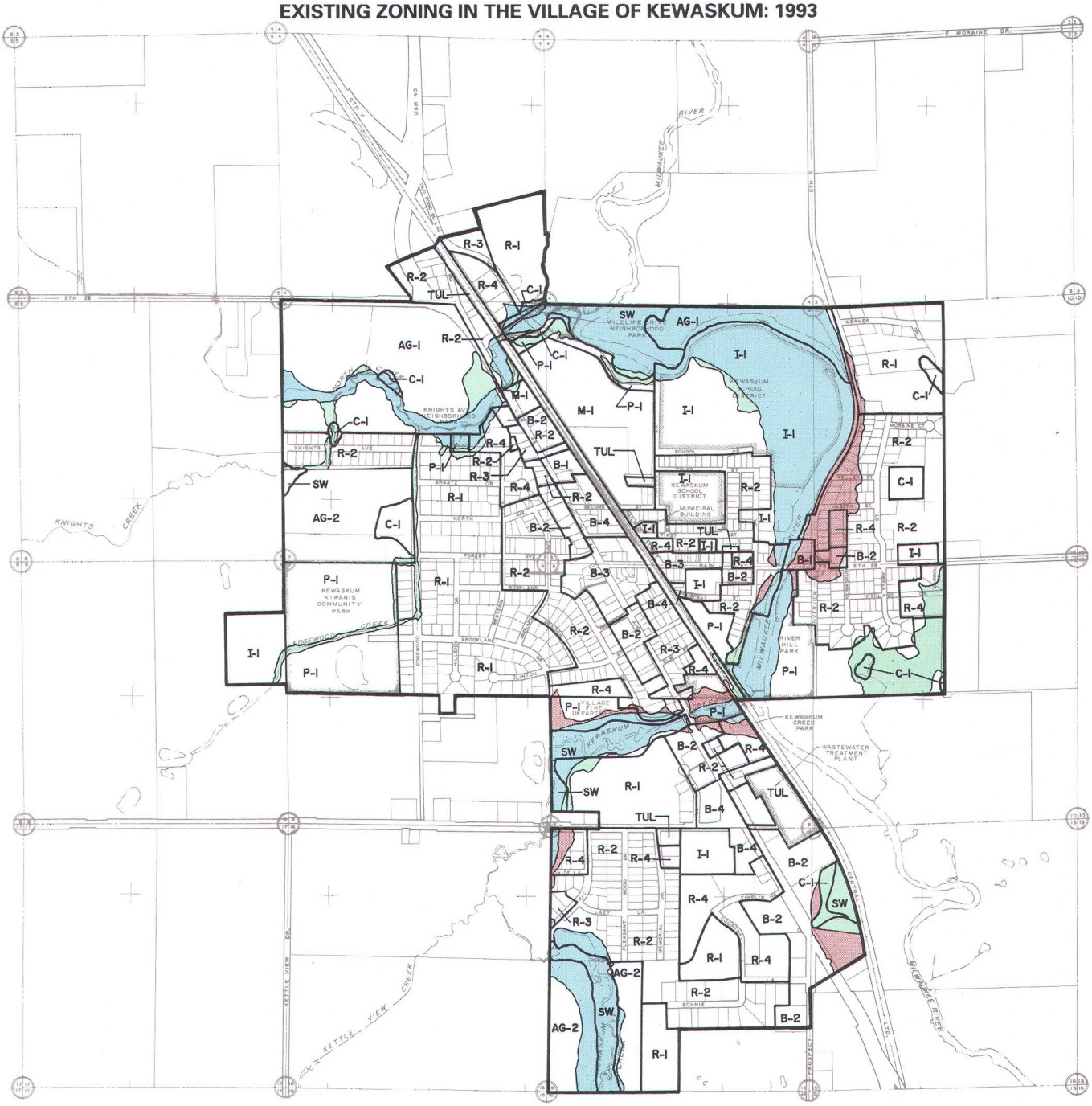
Each zoning ordinance text and accompanying zoning district map must be carefully tailored to the individual community, lest hardships be created, resulting in potential lawsuits and the possibility that the zoning may be set aside by court action as arbitrary, capricious, or unconstitutional. The preparation of a zoning ordinance text and map, therefore, is a complex task, calling for exhaustive studies and close cooperation between the land use planning and legal professions. The zoning text and map must be prepared to bear a just relationship to existing conditions and yet to direct the future development of the community along better lines. If challenged in court, the municipality should be able to show that sufficient accurate data were utilized in drafting the ordinance to meet the legal requirement of reasonableness. The lack of such data could result in the zoning ordinance being declared invalid.

Village of Kewaskum Zoning Ordinances: All land development and building activity in the Village of Kewaskum is regulated by the Village's zoning ordinances. The first Village of Kewaskum zoning ordinance was adopted on November 6, 1972. It has subsequently been updated several times. The present zoning ordinance of the Village of Kewaskum is characterized by the provision of 21 zoning districts: two single-family residential districts, one two-family residential district, one multi-family residential district, one mobile home park residential district, four business districts, two manufacturing districts, one quarrying district, three public-use districts, one conservancy district, and two agricultural districts, plus three overlay districts: a floodway regulatory area and two floodplain regulatory areas. The application of these districts, as of December 1993, is shown on Map 25.

The Village of Kewaskum also adopted a Shoreland-Wetland Zoning Ordinance on May 1, 1989, as set forth in Chapter 16 of the Municipal Code. The regulations of this ordinance supplement those of the underlying general zoning districts. In cases where the regulations of the underlying and overlay zoning districts conflict, the more restrictive regulations govern. The delineation and application of these regulated areas as of December 1993 are also shown on Map 25. Accordingly, the present zoning map should be amended to include this district after the adoption of the land use and street system plans for the Village as presented herein. Table 17 presents a brief summary of the zoning regulations applicable within each of these 22 districts as of December 1993, including permitted and conditional uses, maximum residential density, minimum lot sizes, minimum yard requirements, and maximum building heights.

Map 25

EXISTING ZONING IN THE VILLAGE OF KEWASKUM: 1993



LEGEND

ZONING DISTRICT BOUNDARY LINE	
R-1	SINGLE-FAMILY RESIDENCE DISTRICT
R-2	SINGLE-FAMILY RESIDENCE DISTRICT
R-3	TWO-FAMILY RESIDENCE DISTRICT
R-4	MULTIPLE-FAMILY RESIDENCE DISTRICT
NONE	MOBILE HOME PARK RESIDENCE DISTRICT
B-1	LIMITED RETAIL BUSINESS AND SERVICES DISTRICT
B-2	GENERAL RETAIL BUSINESS AND SERVICES DISTRICT
B-3	CENTRAL COMMUNITY RETAIL BUSINESS AND SERVICES DISTRICT
B-4	GENERAL BUSINESS AND WAREHOUSING DISTRICT
M-1	LIGHT MANUFACTURING DISTRICT
NONE	HEAVY MANUFACTURING DISTRICT
NONE	EXTRACTIVE DISTRICT
I-1	INSTITUTIONAL DISTRICT
C-1	CONSERVANCY DISTRICT
P-1	PARK DISTRICT
TUL	TRANSPORTATION AND UTILITY LANDS DISTRICT
AG-1	EXCLUSIVE AGRICULTURE DISTRICT
AG-2	AGRICULTURE RELATED DISTRICT
SW	SHORELAND-WETLAND DISTRICT

FLOODWAY REGULATORY AREA

FLOODPLAIN-CONSERVANCY REGULATORY AREA

URBAN FLOODPLAIN REGULATORY AREA

GRAPHIC SCALE

0 400 800 1600 FEET

Source: Village of Kewaskum and SEWRPC.

Town of Kewaskum Zoning Ordinance: The planning area, as noted in Chapter I, includes the Town of Kewaskum, which has adopted its own zoning ordinance. Map 26 shows the Town of Kewaskum zoning districts within the Kewaskum planning area in December 1993. The Town of Kewaskum Zoning Ordinance includes 15 base zoning districts and two overlay districts. The districts include: three agricultural districts, one conservancy district, six residential districts, three commercial districts, two industrial districts, and two overlay districts: a Highway Interchange Overlay District and a Planned Unit Development Overlay District. The district regulations are summarized in Table 18.

Washington County Floodplain and Shoreland Zoning Ordinances: The Washington County floodplain and shoreland regulations were adopted on February 19, 1975, as Washington County Shoreland Floodplain Zoning Ordinance and amended on April 15, 1986, as two separate ordinances, Washington County Floodplain Zoning Ordinance and Washington County Shoreland and Wetland Zoning Ordinance. The floodplain and "shoreland" areas in the townships of Washington County, including those in the Town of Kewaskum, as shown on Map 27, are regulated by these two County ordinances and attendant zoning maps dated October 27, 1993. The Washington County Floodplain Zoning Ordinance is characterized by the provision of a floodway district, a flood-fringe district, and a general floodplain district which protect floodplain areas by regulating proposed developments within the 100-year recurrence interval floodplains as delineated in the Federal Flood Insurance Study, County of Washington, Wisconsin, Unincorporated Areas: March 1, 1983.

The Shoreland and Wetland Zoning Ordinance of Washington County regulates "shoreland" areas, defined as those lands lying within 1,000 feet of the ordinary high-water mark, or shoreline, of natural lakes, ponds, or flowages or within 300 feet of the ordinary high-water mark of navigable rivers or streams or to the landward side of the floodplain, whichever distance is greater. Navigability is determined by the Wisconsin Department of Natural Resources on a case-by-case basis and involves field inspection of the water body concerned. In the absence of a Department determination, lakes, ponds, flowages, rivers, and streams may be presumed for planning purposes to be navigable if they are listed in the Wisconsin Department of Natural Resources publication Surface Water Resources of Washington County or are shown on the United States Geological Survey quadrangle maps.

The Washington County shoreland and wetland zoning regulations also apply to areas in the Village of Kewaskum that were annexed after May 7, 1982. Section 59.971(7) of the Wisconsin Statutes requires county shoreland regulations to remain in effect in areas annexed after that date unless the annexing city or village has adopted shoreland regulations that are at least as restrictive as the county's regulations. County shoreland regulations are almost always more restrictive than city or village regulations, because State regulations requiring the adoption of shoreland zoning ordinances specify more restrictive standards for county ordinances than for city and village ordinances. Some of the standards that must be included in county shoreland ordinances but are not required in city and village ordinances are larger minimum lot sizes; 75-foot minimum setback requirements from the ordinary high-water mark of rivers, streams, and lakes; limitations on the removal of shore cover within 35 feet of the ordinary high-water marks; and restrictions on extensive filling, grading, lagooning, dredging, ditching, and excavating in shoreland areas. Shoreland areas annexed after May 7, 1982, as shown on Map 27, are subject to the County shoreland regulations but are administered by the Village. County shoreland zoning regulations were essentially "frozen" in place once those lands were annexed to the Village.

Wetlands five acres or more in area in the unincorporated shoreland jurisdiction areas are protected by the County regulations established for the County Shoreland-Wetland Zoning District. The shoreland areas and the shoreland-wetlands in unincorporated areas within the Kewaskum planning area are both shown on Map 27. It is important to note that the delineation of such shoreland-wetland boundaries should be considered to be illustrative; field surveys are needed at the time of development to delineate wetland areas precisely. Also, floodlands can be more precisely determined by field surveys and use of large scale topographic maps at a scale of one inch equals 200 feet or larger with two-foot contour intervals. The floodway and flood-fringe boundaries for portions of tributaries within the Kewaskum planning areas, such as North Creek, Knights Creek, Kewaskum Creek, and Edgewood Creek, for which no definitive flood hazard data were available, were analyzed by the Regional Planning Commission under the Village

Table 17

SUMMARY OF EXISTING ZONING DISTRICTS FOR THE VILLAGE OF KEWASKUM: 1993

Zoning Districts	Principal Permitted Uses	Conditional Uses	Maximum Residential Density (dwelling units per net acre)	Minimum Lot Size			Minimum Yard Requirements			Maximum Principal Building Height (feet)
				Total Area	Area per Dwelling Unit	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)	
R-1 Single-Family Residence	Single-family dwellings, foster family homes, family day care homes, community living arrangements for eight or fewer persons	Planned residential developments and community living arrangements for nine or more persons	4.4	10,000 square feet	10,000 square feet	75	30	7 on one side, 15 total	25	35
R-2 Single-Family Residence	Single-family dwellings, foster family homes, family day care homes, community living arrangements for eight or fewer persons	Planned residential developments and community living arrangements for nine or more persons	6.1	7,200 square feet	7,200 square feet	60	25	7 on one side, 15 total	25	35
R-3 Two-Family Residence	One- and two-family dwellings, foster family homes, family day care homes, community living, arrangements for eight or fewer persons	Planned residential developments and community living arrangements for nine or more persons	7.3	12,000 square feet	6,000 square feet	90	25	8 on one side, 20 total	25	35
R-4 Multi-Family Residence	Two-family dwellings, multiple-family dwellings, community living arrangements for 15 or fewer persons	Planned residential developments, housing for the elderly, community living arrangements for 16 or more persons	7.3 to 21.8, depending upon dwelling unit type	12,000 square feet	One-bedroom, 2,000 square feet; two-bedroom, 3,000 square feet; three-bedroom or more, 3,500 square feet[a]	90 to 100 feet, depending upon dwelling unit type	30	8 to 25 on one side and 20 to 50 total, depending upon dwelling unit type	25	35
R-5 Mobile Home Park Residence	Individual mobile homes on lots in mobile home subdivisions	Mobile home parks	6.1	7,200 square feet	7,200 square feet	60	25	7 on one side, 15 total	25	35
B-1 Limited Retail and Services	Retail stores, services, offices, shops, clubs, medical clinics, restaurants, hotels and motels	Drive-in establishments, cemeteries and crematory services, veterinary clinics, retail pornography activities	--	10,000 square feet	--	100	25	--	25	35
B-2 General Retail and Services	All B-1 District permitted uses and other uses	Drive-in establishments, automobile sales and services, gasoline service stations, housing for the elderly, antique and second-hand merchandise sales, construction services, communication stations, fuel oil, bottled gas, ice dealers, veterinary clinics, retail pornography activities	--	7,200 square feet	--	60	--	10	25	35

Table 17 (continued)

Zoning Districts	Principal Permitted Uses	Conditional Uses	Maximum Residential Density (dwelling units per net acre)	Minimum Lot Size			Minimum Yard Requirements			Maximum Principal Building Height (feet)
				Total Area	Area per Dwelling Unit	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)	
B-3 Central Community Retail Business and Services	All B-2 permitted uses and other uses	Drive-in banks, crematory services, automobile sales and services, gasoline service stations, antique and second hand merchandise sales, construction services, communication stations, fuel oil, bottled gas, ice dealers, veterinary clinics, retail pornography activities	--	5,000 square feet	--	40	--	--	--	35
B-4 General Business and Warehousing	Wholesale services, retail sales and warehousing	Drive-in establishments, restaurants, cemeteries and crematory services, communication towers, fuel oil, bottled gas, ice dealers, veterinary clinics, freight services, electrical materials, animal products, lawn equipment	--	7,200 square feet	--	60	--	--	--	45
M-1 Light Manufacturing	Processing, manufacturing, and storage	Communication towers, millwork, lumber yards	--	7,200 square feet	--	60	25	10	25	45
M-2 Heavy Manufacturing	All M-1 permitted uses and other uses	Communication towers, millwork, lumber yards, wood pressing, construction of wood buildings and structural members	--	20,000 square feet	--	90	35	25	40	60
M-3 Extractive	Existing extractive operations	Mineral extraction operations	--	--[b]	--	--[b]	100[c]	100[c]	100[c]	45
I-1 Institutional	Schools, churches, hospitals, nursing homes, clinics, uses under public ownership, day care centers, community living arrangements for eight or less persons, housing for the elderly, museums, art galleries	Cemeteries, crematories, community living arrangements for nine or more persons	--	10,000 square feet	--	--	25	7 on one side; 15 total	25	60
C-1 Conservancy	Certain recreational uses, existing agricultural uses, silviculture	New streets, parks and recreation areas, utilities, railroad lines	--	--	--	--	--	--	--	--
P-1 Park	Recreational uses, fair grounds, libraries, museums, art galleries, theaters, health resorts	None	--	--[a]	--	--[a]	50	50	50	35
TUL Transportation and Utility Lands	Existing transportation and utility facilities	Airports, bus and railroad terminals, new utility facilities, landfills	--	--[d]	--	--[d]	--[d]	--[d]	--[d]	--[d]
AG-1 Exclusive Agriculture	Agriculture-related uses, floriculture, viticulture, farm dwellings, forestry, roadside stands	Communication towers	--	40 acres	--	500	80	100	100	50

Table 17 (continued)

Zoning Districts	Principal Permitted Uses	Conditional Uses	Maximum Residential Density (dwelling units per net acre)	Minimum Lot Size			Minimum Yard Requirements			Maximum Principal Building Height (feet)
				Total Area	Area per Dwelling Unit	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)	
AG-2 Agriculture-Related	All AG-1 District permitted uses including other agriculture-related uses, veterinarian services	Drive-in establishments selling fruits and vegetables, communication towers	--	5 acres	--	200	80	50	50	50
SW Shoreland-Wetland	Certain recreational uses, existing agricultural uses, silviculture	--	--	--	--	--	--	--	--	--
F Floodway Regulatory Area	Agricultural activities excluding structures, fish hatcheries, utility lines and towers, certain recreational uses	Navigational structures, bridges, marinas, park and recreational areas excluding structures, parking lots accessory to permitted uses in adjacent districts	--	--	--	--	--	--	--	--
FC Floodplain-Conservancy Regulatory Area	All uses permitted in the Floodway Regulatory Area	All conditional uses permitted in the Floodway Regulatory Area; floodproofed, nonhabitable accessory structures	--	--[e]	--	--[e]	--[e]	--[e]	--[e]	--[e]
UF Urban Floodplain Regulatory Area	Permitted uses in underlying zoning district except structures	Filling and floodproofed structures and utilities permitted in the underlying zoning district	--[e]	--[e]	--[e]	--[e]	--[e]	--[e]	--[e]	--[e]

[a] *A minimum area of 12,000 square feet shall be provided for two-family residential lots.*

[b] *Lots shall provide sufficient area for the principal structure and its accessory structure, the extractive industrial operation, off-street parking and loading areas, and all required yards.*

[c] *The area to be extracted shall be set back at least 200 feet from the right-of-way lines of public streets and all property lines.*

[d] *Lot area, height, and yard requirements shall be determined by the Village Board after a recommendation by the Village Plan Commission.*

[e] *According to underlying basic zoning district requirements.*

Source: Village of Kewaskum Zoning Ordinance and Shoreland-Wetland Zoning Ordinance and SEWRPC.

planning effort and the floodplain boundaries further delineated within the Kewaskum planning area on the basis of the analyses.

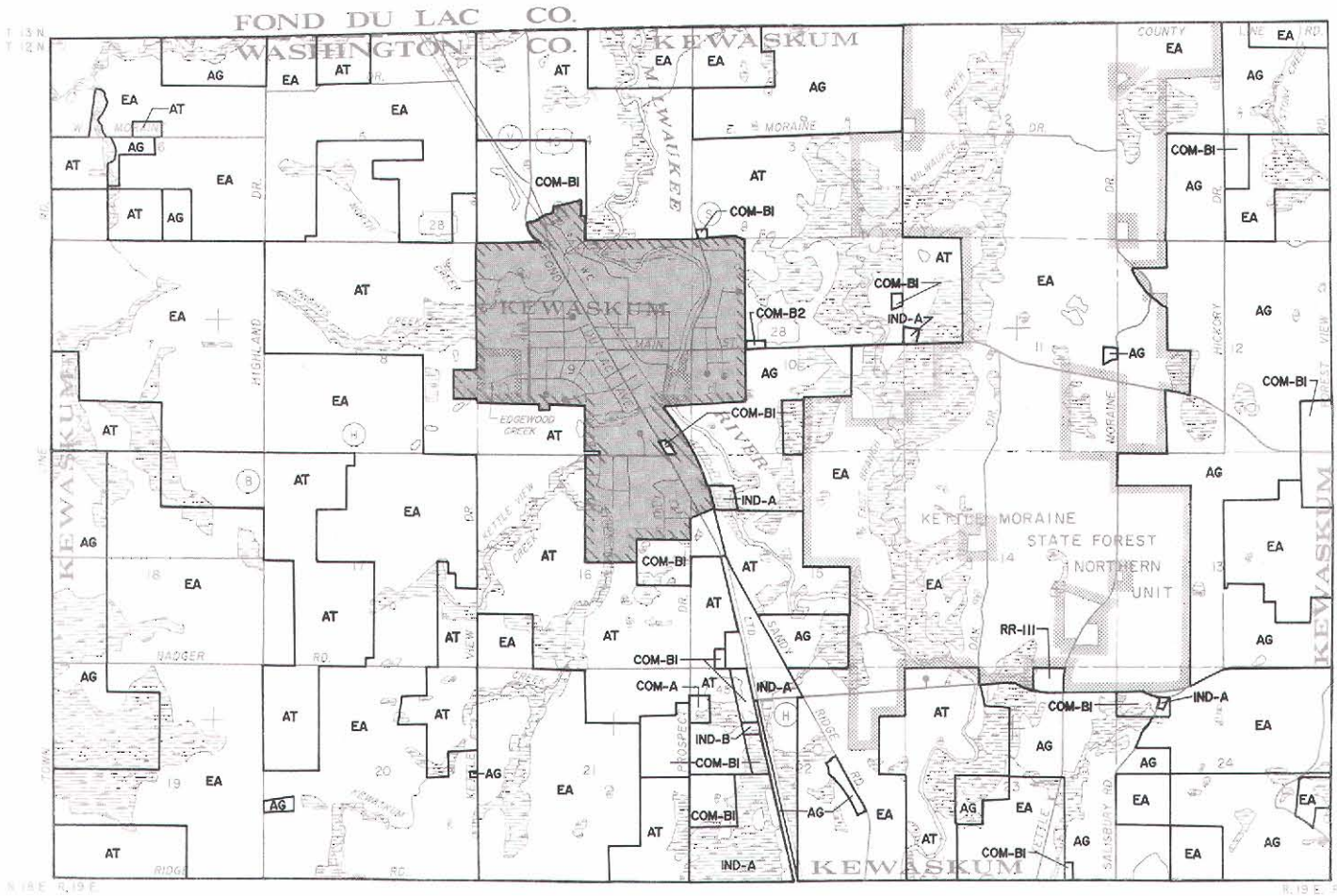
Land Division Ordinance

A land division ordinance is a public law that regulates the division of land into smaller parcels. Such regulations are necessary to ensure that:

1. The subdivision of land will fit properly into the existing and proposed land use pattern and overall plan for the physical development of the community;
2. Adequate provision is made for necessary community and neighborhood facilities, e.g., streets, schools, and parks, so that a harmonious and desirable environment will result;
3. Adequate standards are met in the design of the land divisions and the improvement of the land being subdivided, with particular

Map 26

EXISTING ZONING IN THE TOWN OF KEWASKUM: 1993



LEGEND

	VILLAGE OF KEWASKUM	COM-A	COMMERCIAL A
	ZONING DISTRICT BOUNDARY LINE	COM-BI	COMMERCIAL B-I
AG	AGRICULTURAL	COM-B2	COMMERCIAL B-2
EA	EXCLUSIVE AGRICULTURAL	IND-A	INDUSTRIAL A
AT	AGRICULTURAL TRANSITION	IND-B	INDUSTRIAL B
NONE	WETLAND CONSERVANCY	NONE	HIGHWAY INTERCHANGE OVERLAY
RR-III	RURAL RESIDENTIAL III	NONE	PLANNED UNIT DEVELOPMENT OVERLAY
NONE	RESIDENTIAL A-I		
NONE	RESIDENTIAL A-2		
NONE	RESIDENTIAL A-3		
NONE	RESIDENTIAL B		
NONE	RESIDENTIAL C		

GRAPHIC SCALE
0 1/4 1/2 MILE
0 2000 4000 FEET

Source: Town of Kewaskum and SEWRPC.

Table 18

SUMMARY OF EXISTING ZONING DISTRICTS IN THE TOWN OF KEWASKUM: 1993

Zoning District	Principal Permitted Uses	Conditional Uses	Maximum Residential Density (dwelling units per net acre)	Minimum Lot Size			Minimum Yard Requirements			Maximum Principal Building Height (feet)
				Total Area	Area per Dwelling Unit	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)	
AG Agricultural	Farm and single-family dwellings, farming, public parks, roadside stands, home occupations, churches, schools	Mobile homes, cemeteries, agricultural warehouses, agricultural retail trades, livestock and poultry operations, kennels, manure pits	1.09	40,000 square feet	40,000 square feet	125	25 or more[a]	25	25	35
EA Exclusive Agricultural	Floriculture, dairying, feedlots, nurseries, beekeeping, raising of grains and trees, roadside stands, single-family dwellings, home occupations	Fish hatcheries, churches, schools, cemeteries, farm machinery, mobile homes, veterinarian services, governmental uses, manure pits, farm and single-family dwellings	0.03	35 acres	35 acres	600	25 or more[a]	25	25	35
AT Agricultural Transition Zone	All EA permitted uses	All EA conditional uses	0.03	35 acres	35 acres	600	25 or more[a]	25	25	35
WC Wetland Conservancy	Agricultural uses, wild crop harvesting, trails, preserves, conservation practices, public park and recreation excluding buildings	Drainage projects, hatcheries, private recreational facilities, transmission lines	--	--	--	--	--	--	--	--
RR-III Rural Residential	Single-family dwellings, home occupations, parks, playgrounds, community living arrangements for eight or fewer persons, farming, nurseries, roadside stands, conservation practices	Keeping livestock and poultry, community living arrangements for nine or more persons, kennels	0.33	3 acres	3 acres	300	42 or more[a]	25	50	35
Residential A-1	Single-family dwellings, parks, playgrounds, churches, schools, home occupations and related offices, community living arrangements for eight or fewer persons	Farming, keeping livestock and poultry, wholesale fish hatcheries, community living arrangements for nine or more persons, nurseries	1.09	40,000 square feet	40,000 square feet	125	25 or more[a]	7.5 on one side, 20 total	25	35
Residential A-2	All Residential A-1 permitted uses	Two-family dwellings and community living arrangements for nine or more persons	1.09	40,000 square feet	40,000 square feet	100	25 or more[a]	7.5 on one side, 20 total	25	35
Residential A-3	All Residential A-2 permitted uses. Two-family dwellings and community living arrangements up to 15 persons	Multi-family dwellings (three to eight units) and community living arrangements for 16 or more persons	3.63 to 10.89, depending upon dwelling unit type	12,000 square feet	Single-family, 12,000 square feet; two-family, 6,000 square feet; multi-family, 4,000 square feet	85	25 or more[a]	7.5 on one side, 20 total	25	35
Residential B	All Residential A-2 permitted uses. Two- to eight-family dwellings and community living arrangements for up to 15 persons	Community living arrangements for 16 or more persons	3.63 to 10.89, depending upon dwelling unit type	12,000 square feet	Single-family, 12,000 square feet; two-family, 6,000 square feet; multi-family, 4,000 square feet	75	25 or more[a]	25 on one side, 50 total	25	45

Table 18 (continued)

Zoning District	Principal Permitted Uses	Conditional Uses	Maximum Residential Density (dwelling units per net acre)	Minimum Lot Size			Minimum Yard Requirements			Maximum Principal Building Height (feet)
				Total Area	Area per Dwelling Unit	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)	
Residential C	All Residential A-2 permitted uses. Two- to four-family dwellings and community living arrangements up to 15 persons	Community living arrangements for 16 or more persons	0.33 to 1.33, depending upon dwelling unit type	3 acres	32,670 square feet to 3 acres, depending upon dwelling unit type	125	25 or more[a]	25 on one side 50 total	25	45
Commercial A	All Residential A-2 permitted uses except community living arrangements. Retail stores, shops, offices, services	Hospitals, service stations, laundromats, hotels, motels, kennels, restaurants	--	Unsewered, 40,000 square feet; sewered, 12,000 square feet	--	Unsewered, 125; sewered, 75	25 or more[a]	25 on one side, 50 total	10	Residential, 45; commercial, 1 for each foot of front setback
Commercial B-1	All Commercial A permitted uses. Offices, clubs, parking lots, retail goods, services, or entertainment	Drive-in theaters and kennels	--	Unsewered, 40,000 square feet; sewered, 12,000 square feet	--	Unsewered, 125; sewered, 75	25 or more[a]	25 on one side, 50 total	10	Residential, 45; commercial, 1 for each foot of front setback
Commercial B-2	All Commercial B-1 permitted uses except for dwelling units	Auto body shops and kennels	--	Unsewered, 40,000 square feet; sewered, 5,000 square feet	--	Unsewered, 125; sewered, 75	25 or more[a]	25 on one side, 50 total	10	1 for every foot of front setback
Industrial A	All Commercial B-1 permitted uses except for churches, schools, and dwelling units. Warehousing, distributing, terminals, printing, bottling and recycling plants	None	--	Unsewered, 40,000 square feet; sewered, 5,000 square feet	--	Unsewered, 125; sewered, 75	25 or more[a]	25 on one side, 50 total	10	45
Industrial B	All Industrial A permitted uses. Other manufacturing, fabricating, processing and storage uses	Automobile wrecking and junkyards, storage, manufacturing and processing of certain materials	--	Unsewered, 40,000 square feet; sewered, 5,000 square feet	--	Unsewered, 125; sewered, 75	25 or more[a]	25 on one side, 50 total	10[b]	45
Highway Interchange Overlay	Single- and two-family dwellings	All permitted Residential B; Commercial A, B-1, and B-2; and Industrial A and B principal or accessory uses	--[c]	--[c]	--[c]	--[c]	--[d]	--[d]	--[d]	45
Planned Unit Development Overlay	--[e]	--[e]	--[e]	2 acres	--[e]	--[e]	--[e]	--[e]	--[e]	--[e]

[a]The setback distance from a Class A Highway shall be 100 feet from the centerline of the road or 42 feet from the highway right-of-way line, whichever is greater; from a Class B Highway it shall be 75 feet from the centerline of the road or 30 feet from the highway right-of-way, whichever is greater; and from a Class C Highway it shall be 55 feet from the centerline of the road or 25 feet from the right-of-way, whichever is greater. The setback distance shall be increased by 50 feet on controlled highways.

[b]Conditional uses allowed within the Industrial B District must have a minimum side yard setback of 25 feet on both sides and a minimum rear yard setback of 25 feet.

[c]Underlying zoning district requirements apply.

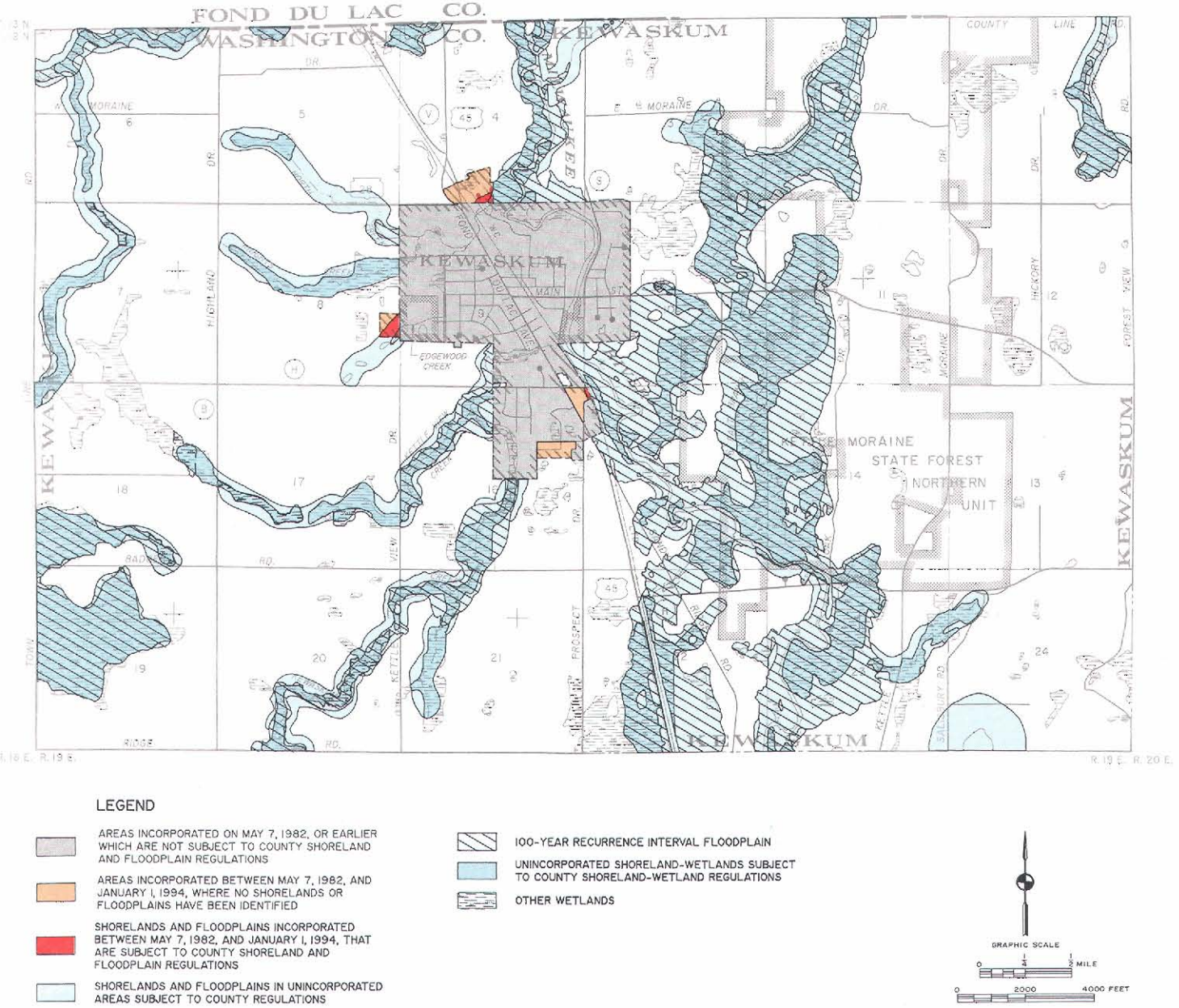
[d]All minimum yard requirements of the underlying districts are to be increased by 50 feet on yards abutting interchange right-of-way.

[e]As approved by the Town Board.

Source: Town of Kewaskum Zoning Ordinance and SEWRPC.

Map 27

WETLANDS AND FLOODPLAINS IN THE KEWASKUM PLANNING AREA SUBJECT TO WASHINGTON COUNTY SHORELAND AND FLOODPLAIN ZONING REGULATIONS: 1993



LEGEND

- AREAS INCORPORATED ON MAY 7, 1982, OR EARLIER WHICH ARE NOT SUBJECT TO COUNTY SHORELAND AND FLOODPLAIN REGULATIONS
- AREAS INCORPORATED BETWEEN MAY 7, 1982, AND JANUARY 1, 1994, WHERE NO SHORELANDS OR FLOODPLAINS HAVE BEEN IDENTIFIED
- SHORELANDS AND FLOODPLAINS INCORPORATED BETWEEN MAY 7, 1982, AND JANUARY 1, 1994, THAT ARE SUBJECT TO COUNTY SHORELAND AND FLOODPLAIN REGULATIONS
- SHORELANDS AND FLOODPLAINS IN UNINCORPORATED AREAS SUBJECT TO COUNTY REGULATIONS
- 100-YEAR RECURRENCE INTERVAL FLOODPLAIN
- UNINCORPORATED SHORELAND-WETLANDS SUBJECT TO COUNTY SHORELAND-WETLAND REGULATIONS
- OTHER WETLANDS

GRAPHIC SCALE
0 1/4 1/2 1 MILE
0 2000 4000 FEET

Source: Washington County Land Use and Park Department and SEWRPC.

attention to such requirements as utilities, stormwater drainage, street improvements, and lot improvements;

4. A sound basis is provided for clear and accurate property boundary or lot line records; and

5. The health, safety, and general welfare of all citizens in the community, as well as of the future occupants of the land to be subdivided, are protected.

Ideally, land division control regulations are a means of implementing, or carrying out, a community comprehensive plan. As such, land division regulations should coordinate and integrate development with the comprehensive plan; they are, therefore, properly prepared within the context of

such a plan. Since land division is not merely a means of marketing land, but rather the first step in the process of building a community, substantial benefits are derived from sound subdivision regulations. Much of the form and character of a community is determined by the quality of its land divisions and the standards which are built into them. Once land has been divided into blocks and lots, streets established, and utilities installed, the development pattern is permanently established and unlikely to be changed. For generations, the entire community, as well as the individuals who occupy these subdivisions, will be influenced by the quality and character of the subdivision design.

Village of Kewaskum Land Division Ordinance: The Village's land division ordinance, known as the Subdivision and Platting Ordinance of the Village of Kewaskum, is set forth in Chapter 18 of the Municipal Code. By reference and associated text, the ordinance conforms to the procedures outlined in Chapter 236 of the Wisconsin Statutes for platting lands within the corporate limits of the Village and its extraterritorial plat approval jurisdiction area, that is, areas located outside of the Village's corporate limits but within one and one-half miles of those limits. Specifically, the ordinance regulates the creation of "subdivisions," defined as the division of land into five or more parcels of 1.5 acres or smaller in area at any one time or by successive divisions within a five-year period. Such land divisions are created by a subdivision plat. All other land divisions other than "subdivisions" are also regulated by this ordinance, and may be created through use of a certified survey map.

The Village land division ordinance sets forth design standards and specific data requirements to be provided on all preliminary plats, final plats, and certified survey maps. Importantly, this ordinance requires a subdivider to install such subdivision improvements as sanitary sewers, water distribution lines, sidewalks, streetlights, street signs, street pavements, stormwater drainage facilities, and erosion and sediment control devices; to provide easements for certain improvements; and to make provision for park, playground, and open space sites or pay a fee in lieu of site dedication.

Washington County and Town of Kewaskum Land Division Ordinances: The Kewaskum planning area lies within Washington County and includes the Town of Kewaskum. Both County and Town have adopted a land division ordinance.

The Town of Kewaskum land division ordinance, known as the Subdivision and Platting Code, regulates all divisions of unplatted land into parcels of less than five acres in area. This ordinance regulates "subdivisions," defined similarly to the Village of Kewaskum ordinance, in accordance with Chapter 236 of the Wisconsin Statutes. Other land divisions, except subdivisions, into parcels of less than five acres in area may be created through use of a certified survey map. The Town land division ordinance should regulate all land division up to, and including, lands located within the Town's largest zoning district. Accordingly, certified survey maps should be required for all divisions 35 acres or less in area.

Washington County has also adopted a land division ordinance for unincorporated areas within the County. Any division of land which creates one or more parcels 10 acres or less in area is regulated by the Land Division Ordinance of Washington County. Specifically, this ordinance regulates "minor land divisions" for parcels of ten acres or less in area, and "subdivisions" of five or more parcels, five acres or less in area, created at any one time or created by successive divisions within five years.

Like the Village of Kewaskum land division ordinance, each of the two aforereferenced land division ordinances sets forth detailed design standards and specific data be provided on all preliminary plats, final plats, and certified survey maps. These ordinances also require the subdivider to install subdivision improvements prior to final plat approval. The Town of Kewaskum land division ordinance provides provisions for the dedication of lands for parks or a park fee in lieu of site dedication. The Land Division Ordinance of Washington County requires that lands be dedicated for park purposes, but specifies that a fee in lieu of site dedication may be required only by the Town Board.

Official Mapping

The official map is one of the oldest plan implementation devices at the disposal of the local communities. It is also one of the most effective and efficient devices to manage the problem of reserving land for future public use. Section 62.23(6) of the Wisconsin Statutes provides that the governing body of any local municipality may establish an official map for the precise identification of right-of-way lines and site boundaries of streets, highways, waterways, and parkways and the location and extent of railroad rights-of-way, public transit facili-

ties, and parks and playgrounds. Such a map has the force of law and is deemed to be final and conclusive with respect to the location and width of both existing and proposed streets, highways, waterways, and parkways and the location and extent of railroad rights-of-way, public transit facilities, and parks and playgrounds. The Statutes further provide that the official map may be extended to include areas beyond the corporate limits but within the extraterritorial plat approval jurisdiction of the municipality.

The official map is thus intended to implement the community's master plan of streets, highways, parkways, parks, and playgrounds. Its basic purpose is to prohibit the construction of buildings or structures and their associated improvements on land that has been designated for future public use. The official map is a plan implementation device that operates on a communitywide basis in advance of land development and can thereby effectively assure the integrated development of the street and highway system. Unlike subdivision control, which operates on a plat-by-plat basis and acts on development proposals, the official map can operate over the entire Village in advance of development proposals. The official map is a useful device to achieve public acceptance of long-range plans, since it serves legal notice of the government's intention to all parties concerned well in advance of any actual improvements. It thereby avoids the altogether too common situation of development being undertaken without knowledge or regard for the long-range plan. Thus it can help avoid public resistance when plan implementation becomes imminent.

The Village prepared the official map for the Village and environs in 1972. This map, however, has not been formally adopted and has not been revised to reflect various changes that have taken place since the creation of the map. The official map should be updated to reflect current conditions, on the basis of present cadastral maps, and adopted officially. It should facilitate the proper implementation of any adopted development plan proposals, including the development plans set forth in this report, relating to streets, highways, waterways and parkways, railroads, public transit facilities, parks, and playgrounds.

Chapter VI

OBJECTIVES, PRINCIPLES, STANDARDS, AND DESIGN GUIDELINES

Planning is a rational process for formulating and meeting objectives. Therefore, the formulation of objectives is an essential task which must be undertaken before a comprehensive plan can be prepared and evaluated. Objectives guide the preparation of plans and, when converted to specific measures of plan effectiveness, termed standards, provide the structure for evaluating how well the plan meets planning objectives. Because planning objectives provide this basis for plan preparation and evaluation, the formulation of objectives is a particularly important step in the planning process.

Accordingly, a set of recommended objectives with supporting principles, standards, and related urban design guidelines was formulated for the Kewaskum planning area. The objectives relate primarily to the allocation and spatial distribution of the various land uses and essential community facilities and services required to meet the needs of the resident population of the Kewaskum area over the next two decades. The associated standards perform an important function in plan design since they form the basis on which estimates of future community land use needs are based, as presented in Chapter VII of this report. Related urban design guidelines were also formulated for evaluating and guiding future urban developments and redevelopments in the Kewaskum area and for use in developing the urban design elements of the plan, as presented in Chapter VIII.

It is important to note that the objectives, principles, standards, and urban design guidelines presented herein are intended to serve as a basis for determining desired physical development patterns, not as rigid and narrow rules for identifying land use patterns and facility needs. The standards, particularly, must be applied with judgment in the more detailed local planning and engineering studies which will be needed during plan implementation.

DEFINITIONS

The terms "objective," "principle," "standard," "guidelines," "plan," "policy," and "program" are subject to a range of interpretations. To clarify their meanings, the Regional Planning Commission has defined these terms as they are used within the context of this planning process as follows:

1. Objective: A goal or end toward the attainment of which plans and policies are directed.

2. Principle: A fundamental, generally accepted tenet used to support objectives and prepare standards and plans.

3. Standard: A criterion used as a basis of comparison to determine the adequacy of plan proposals to attain objectives.

4. Guidelines: A body of information intended to provide guidance in the location, design, and maintenance of urban developments and redevelopments and which are intended to be judiciously applied and which may be departed from in specific situations.

5. Plan: A design which seeks to achieve agreed-upon objectives.

6. Policy: A rule or course of action used to ensure plan implementation.

7. Program: A coordinated series of policies and actions to carry out a plan.

Although this chapter deals with only the first four of these terms, an understanding of their interrelationship and the concepts they represent is essential to the following discussion of objectives, principles, standards, and related urban design guidelines.

OBJECTIVES, PRINCIPLES, AND STANDARDS

To be useful in land use planning, objectives must be logical, stated clearly, and, to the extent feasible, derived from local values. The quantification of objectives for plan design and evaluation is facilitated by complementing each objective with a set of quantifiable standards. These standards are, in turn, directly related to a planning principle which supports the objective. The objectives, as developed and approved by the Village Plan Commission, deal

primarily with: 1) allocation of land uses, 2) spatial distribution of land uses, 3) protection of the natural resource base and agricultural lands, 4) provision of recreational opportunities, 5) provision of transportation facilities, 6) provision of fire-protection services, 7) provision of adequate library services, 8) provision of adequate location and choice of housing, and 9) preservation of historical resources. Each objective, together with its supporting principles and standards, is listed in the following section.

OBJECTIVES, PRINCIPLES, AND STANDARDS

OBJECTIVE NO. 1—LAND USE ALLOCATION

A balanced allocation of space to the various land use categories which meets the social, physical, and economic needs of the resident population of the Kewaskum area.

PRINCIPLE

The planned supply of land set aside for any given use should approximate the known and anticipated demand for that use.

STANDARD

The amount of land area set aside for accommodating forecast growth in the Kewaskum planning area should be determined, in part, by application of the standards set forth in Table 19.

OBJECTIVE NO. 2—LAND USE SPATIAL DISTRIBUTION

A spatial distribution of the various land uses which results in a compatible arrangement of land uses and one which is properly related to the supporting transportation, utility, and public facility systems.

PRINCIPLE

The proper location and extent of commercial, educational, transportation, and recreational facilities are important determinants of the quality of urban life in the Kewaskum area and should be designed to meet the needs of the resident population.

A. Transportation and Utility Facilities

Principle

The transportation and public utility facilities and the land use pattern which these facilities serve and support are mutually interdependent in that the land use pattern determines the demand for, and loadings upon, transportation and utility facilities; these facilities, in turn, are essential to, and form a basic framework for, land use development.

Standards

1. Urban development should be located to make maximum use of the existing transportation and utility systems.

2. All lands developed, or proposed to be developed, for urban uses should be located in areas readily serviceable by extensions of the existing public sanitary-sewerage system, and, preferably, within the gravity- drainage area of the system.

3. All land developed, or proposed to be developed, for urban uses should be located in areas readily serviceable by extensions of the existing public water-supply system.

4. Adequate stormwater-management facilities should be provided for all urban development.

B. Principal Urban Uses

Principle

The proper location of urban uses to land can avoid or minimize hazards and dangers to health, safety, and welfare and can maximize amenity and convenience in terms of accessibility to supporting land uses.

Standards

1. Facilities such as shopping centers, parks, schools, library, and other services should be situated so as to serve the largest possible population for whom the services are intended. Sites for shopping, educational, employment, and transit facilities to serve neighborhoods and the community should be provided, in part, in accordance with the standards set forth in Tables 20 and 21. Sites for outdoor recreational facilities to serve the neighborhoods and community should be provided in accordance with the standards

Table 19

URBAN LAND USE STANDARDS FOR THE VILLAGE OF KEWASKUM URBAN SERVICE AREA

Land Use Category	Development Standard (gross area)[a]
Residential	
Single-Family Dwellings	
Suburban-Density (1.5 to 4.9-acre lots)	204.0 acres per 100 dwelling units
Low-Density (20,000 to 65,339-square foot lots)	88.0 acres per 100 dwelling units
Medium-Density (7,200 to 19,999-square foot lots)	32.0 acres per 100 dwelling units
Two-Family Dwellings	
Medium-High-Density (6.1 to 7.3 dwelling units per net residential acre[b])	17.0 acres per 100 dwelling units
Multi-Family Dwellings	
High-Density (7.4 to 21.8 dwelling units per net residential acre[b])	10.0 acres per 100 dwelling units
Commercial	
Retail	6.0 acres per 100 retail trade employees
Office	2.0 acres per 100 service employees
Industrial	9.0[c] acres per 100 industrial employees
Governmental and Institutional[d]	
Public Elementary School	3.0 acres per 100 students[e]
Public Middle School	3.2 acres per 100 students[f]
Public High School	3.0 acres per 100 students[g]
Church	2.5 acres per 1,000 persons
Other[h]	4.5 acres per 1,000 persons
Public Outdoor Recreation	
Regional and Multi-Community	In accordance with the adopted Washington County Park and Open Space Plan
Community Park and Middle or High School Sites Combined[i]	3.1 acres per 1,000 persons
Neighborhood Park and Elementary School Sites Combined[i]	3.3 acres per 1,000 persons

[a]Gross areas include associated street rights-of-way and off-street parking for each land use category. These standards have been based upon existing land use studies of the Southeastern Wisconsin Region since 1963 and are reasonably responsive to expected future, as well as, present conditions.

[b]Net residential acreage includes only those areas occupied by housing units and associated buildings plus required yards and open spaces. It does not include associated street or utility areas.

[c]Assuming a net land-to-building ratio of from 5:1 to 7:1. If the net land-to-building ratio is between 3:1 and 5:1, then 6.0 acres per 100 employees should be used.

[d]The overall standard for all governmental and institutional uses, including schools, churches, and other governmental and institutional uses, is 12.0 acres per 1,000 persons.

[e]Standard for elementary schools with 500 students.

[f]Standard for middle schools with 900 students.

[g]Standard for high schools with 1,500 students.

[h]This category includes hospitals, municipal buildings, libraries, post offices, police and fire stations, and other related governmental and institutional uses.

[i]School sites should be associated with a park site. Natural areas should also be incorporated into the design of a park site; however, such areas as steep slopes, floodlands, drainageways, wetlands, and woodlands should not be included when determining whether acreage standards have been met for accommodating certain recreational facilities. See Tables 22 and 23 for more details.

Source: SEWRPC.

Table 20

SITE AREA, SERVICE RADIUS, AND TRAVEL DISTANCE FOR COMMUNITY FACILITIES IN THE VILLAGE OF KEWASKUM URBAN SERVICE AREA

Facility Type[a]	Service Capacity	Required Site Area (gross acres)	Service Radius: Medium-Density Neighborhood[b] (miles)	Walking Distances[c] (miles)		Biking Distances[c] (miles)	
				Optimum	Maximum	Optimum	Maximum
Shopping Facilities							
Retail and Service Centers							
Neighborhood[d]	4,000 to 10,000 persons	5-15	1.25	0.25	0.50	0.75	1.25
Community[e]	10,001 to 75,000 persons	15-60	1.75	0.50	0.75	1.00	1.75
Highway-Oriented Commercial Developments	15,000 vehicles or more per day[f]	--[g]	--	--	--	--	--
Employment Facilities							
Community Office Developments	1,000 or more employees	Minimum 20	--	1.00	1.50	3.00	5.00
Community Industrial Developments	300 or more employees	Minimum 20	--	1.00	1.50	3.00	5.00
Public Transit Facilities							
Local Transit Stops	--	--	0.25	0.25	0.50	0.75	1.00
Rapid-Transit Facilities[h]	--	--	3.00	0.50	1.00	1.00	3.00
Public Education Facilities							
Elementary School (Grades K-5)	500 students	15[i,j]	0.75[m]	0.25	0.50	0.75	1.00
Middle School (Grades 6-8)	900 students	29[i,k]	1.00[m]	0.50	0.75	1.00	1.50
Senior High School (Grades 9-12)	1,500 students	45[i,l]	1.50[m]	0.75	1.00	1.50	2.00
Community Libraries	--	--	1.50	0.75	1.00	1.50	2.00
Public Outdoor Recreational Facilities							
Neighborhood	4,000 to 8,000 persons minimum 7,500 persons	5-24[n]	0.75	0.25	0.50	0.50	0.75
Community		25-99	2.00	0.50	1.00	1.50	2.00
Multi-Community	--	100-249	4.00	--	--	3.00	5.00
Major	--	250 or more	10.00	--	--	3.00	5.00

[a] *Service radius standards for fire stations are presented under Objective No. 6 of this chapter.*

[b] *A medium-density neighborhood is defined as an area having between 2.2 to 6.1 dwelling units per net acre, with an average of approximately 6,500 persons per square mile.*

[c] *One-way distances from the farthest dwelling unit to the facility.*

[d] *A neighborhood shopping center is defined as concentrations of stores including a grocery store or supermarket as the anchor and other retail stores and services such as a drugstore, variety store, beauty parlor, laundromat, or bank that meet the day-to-day needs of neighborhood residents. Neighborhood shopping centers should not deal in such shopper goods as clothing, furniture, and appliances.*

[e] *Community shopping centers usually contain at least one supermarket and either a junior department store, discount store, or similar major tenant in addition to other retail stores and services found in neighborhood shopping centers. The need for a neighborhood shopping center can be met by a community shopping center.*

[f] *Indicates minimum average weekday traffic volume required on an abutting freeway, highway, or arterial street.*

[g] *A minimum site area of five acres at an interchange location should be provided for commercial developments serving freeway traffic.*

[h] *Includes park-and-ride lots and park-and-pool lots.*

[i] *Includes both land for the school building and for associated facilities such as parking, loading, and recreation facilities.*

[j] *Elementary school site area is based upon the standard of 10 acres, plus one acre for each 100 students.*

[k] *Middle school site area is based upon the standard of 20 acres, plus one acre for each 100 students.*

[l] *High school site area is based upon the standard of 30 acres, plus one acre for each 100 students.*

[m] *Kewaskum School District provides busing services for kindergarten students located one or more miles from their school and for students from grades one through 12 located two or more miles from their school.*

[n] *Neighborhood park sites not associated with a school site should contain between 10 to 15 acres in area per park site, depending on the types of outdoor recreation facilities needed to serve the neighborhood residents.*

Source: SEWRPC.

Table 21

URBAN LAND USE DISTRIBUTION IN A TYPICAL MEDIUM-DENSITY NEIGHBORHOOD[a]

Land Use Category	Acres	Percent of Total
Residential[b]		
Single-Family	403.2	63.0
Two-Family	28.8	4.5
Multi-Family	22.4	3.5
Subtotal	454.4	71.0
Neighborhood Commercial[c]	6.4	1.0
Public and Quasi-Public		
Elementary School	15.0	2.4
Park[d]	10.5	1.6
Other[e]	6.5	1.0
Subtotal	32.0	5.0
Streets and Utilities	147.2	23.0
Total	640.0[f]	100.0

[a]*Medium density neighborhoods may contain an average population of 6,500 persons, ranging from about 4,000 to 8,000 persons, that are housed in approximately 2,000 dwelling units covering one square mile in area.*

[b]*Of the approximately 2,000 total dwelling units in a neighborhood unit, about 1,590 dwelling units, or about 79 percent, consist of single-family units; about 210 dwelling units, or 11 percent, consist of two-family units; and about 200 dwelling units, or 10 percent, consist of multi-family units.*

[c]*This distribution standard is intended to be applied in a combined fashion whereas one neighborhood retail and service center would be concentrated on one centrally located site that would serve four neighborhood units.*

[d]*Represents only those areas used for intensive outdoor recreational activities.*

[e]*This category may include a church, cemetery, fire station, or other related governmental and institutional use.*

[f]*This total excludes natural areas which should be, nevertheless, incorporated into neighborhood units and considered as additions to the urban land use distribution standards.*

Source: SEWRPC.

set forth in Tables 20 and 22. Table 20 also provides walking and bicycling travel distance standards that should be met for supportive neighborhood and community services.

2. Urban residential uses, that is, residential areas with densities equivalent to lot areas less than five acres in size per dwelling unit, should be located in well-planned neighborhood units served by centralized public sanitary-sewerage and water-supply facilities and contain, within a reasonable walking and biking distances, necessary local supporting services, such as parks, schools, and shopping areas. They should have reasonable access through the appropriate component of the transportation system to employment centers, community and major shopping centers, cultural and governmental centers, and secondary schools and higher educational facilities. Table 21 also provides land use distribution standards, including those for different housing types, for a typical medium-density residential neighborhood.

3. Rural residential uses should have reasonable access through the appropriate component of the transportation system to local service uses; employment, commercial, cultural, and governmental centers; and primary and secondary educational facilities, thereby properly relating such development to a rural environment.

Table 22

STANDARDS FOR PUBLICLY OWNED OUTDOOR RECREATION SITES FOR THE VILLAGE OF KEWASKUM URBAN SERVICE AREA

Site Type	Size (gross acres)	Parks			Schools[a]		
		Minimum per Capita Requirement (acres per 1,000 persons)[b]	Typical Facilities	Service Radius (miles)[c]	Minimum per Capita Requirements (acres per 1,000 persons)[b]	Typical Facilities	Service Radius (miles)
Community	25-99	2.2	Swimming pool or beach, nature study area, picnic areas, playfields, baseball diamonds, softball diamonds, tennis courts, passive activity area[d]	2.0[e]	0.9	Playfields, baseball diamonds, softball diamonds, tennis courts	0.5-1.0
Neighborhood	Less than 25	1.7	Picnic areas, softball diamonds, tennis courts, playgrounds, playfields, basketball goals, ice-skating rink, passive activity area[d]	0.5-1.0[f]	1.6	Playfields, playgrounds, softball diamonds, tennis courts, basketball goals	0.5-1.0

[a] *In urban areas, the facilities commonly found at school recreation sites often provide a substitute for facilities usually found in parks. Indeed, recreation lands at the neighborhood level are most appropriately provided through a joint community-school district venture with the recreational facilities and space being located on one site, available to serve the recreation demands of both the student and the resident neighborhood population.*

[b] *The per capita acreage standards for neighborhood and community recreation sites are intended to be applied in a combined fashion. In this respect, a total of 6.4 acres of land should be provided at neighborhood or community recreation sites for each thousand urban area residents. Of the 6.4 acres, 3.9 acres should be provided at neighborhood or community parks, and 2.5 acres should be provided at school recreation sites or, if not distributed to school sites, then added to neighborhood or community parks.*

[c] *In the application of these service radius standards, the need for a neighborhood park can be met by a community, multi-community, or major park. The need for a community park can be met by a multi-community or major park.*

[d] *A passive activity area is defined as an area that provides an opportunity for less athletic recreational pursuits, such as pleasure walking, relaxation, and informal picnicking. Such areas are generally in all parks and consist of a landscaped area with mowed lawns, shade trees, benches, and picnic tables.*

[e] *This standard applies to urban areas with a resident population of at least 7,500 persons. If a municipal population is less than 7,500 persons, then at least one community park should still be provided to serve residents of the municipality.*

[f] *A service radius of 0.5 mile should be used in high-density residential areas, 0.75 mile in medium-density residential areas, and 1.0 mile in low-density residential areas.*

Source: SEWRPC.

4. Retail and service commercial uses should be located in planned commercial centers. Development of new commercial strip areas, that is, contiguous individual parcels of shallow depth with direct street access, should be avoided. Commercial development on each corner of an intersection should also be avoided. Avoidance of strip and four-corner commercial development will help prevent the creation of traffic hazards, such as conflicts with turning movements and conflicts between pedestrian and vehicular traffic. Sites for new neighborhood and community commercial facilities should be provided in accordance with the service radius standards set forth in Table 20.

5. Industrial uses should be located in planned industrial centers with direct access to arterial street and highway facilities and reasonable access through an appropriate component of the transportation system to residential areas. Industrial uses should be provided with adequate water supply, public sanitary-sewerage and stormwater-management facilities, and power supply, including natural gas and electricity. Sites for new community industrial centers should be provided in accordance with the standards set forth in Table 20.

OBJECTIVE NO. 3—NATURAL RESOURCES PROTECTION

Encourage the protection, preservation, and wise use of the natural resources and prime agricultural lands in the planning area. Accordingly, the preservation of sufficient high-quality open space lands for protection of the underlying and sustaining natural resource base will enhance the social and economic well-being and environmental quality of the area.

PRINCIPLE

The proper allocation of land uses can assist in maintaining an ecological balance between human activities and the natural environment. Such ecological balance and natural beauty are important determinants of a community's ability to provide a pleasant and habitable environment for all forms of life. Preservation of the most significant aspects of the natural resource base, that is, primary environmental corridors and prime agricultural lands, further contributes to the maintenance of the ecological balance, natural beauty, and economic well-being of the Village and environs.

A. Soils

Principle

The proper relation of urban and rural land use development to soils can serve to avoid costly environmental and developmental problems, aid in the establishment of better settlement patterns, and promote the wise use of an irreplaceable resource.

Standards

1. Unsewered rural developments should not be located in areas covered by unsuitable soils for onsite sewage-disposal systems. When development is proposed on soils exhibiting unsuitable conditions, careful attention must be given in the design to overcome these limitations properly.

2. Sewered urban developments should not be located in areas covered by soils with severe limitations for such development. When development is proposed on soils exhibiting severe limitations, careful attention should be given in the design to properly overcome these limitations.

B. Lakes and Streams

Principle

Lakes and streams and their associated floodlands and shorelands contribute to the community's environmental health in a number of ways. They add to the atmospheric water supply through evaporation; provide a suitable environment for desirable and sometimes unique plant and animal life; provide the population with opportunities for certain scientific, cultural, and educational pursuits; constitute prime recreational areas; provide a desirable aesthetic setting for certain types of land use development; serve to store and convey floodwaters; and provide a source of water.

Standards

1. Floodlands should not be allocated to any urban development which would cause, or be subject to, flood damage.

2. The floodwater storage capacity of natural floodlands should not be reduced by urban or rural development.

3. The flow capacity of perennial stream channels and associated floodlands should not be reduced below existing conditions.

4. Adequate stormwater-drainage facilities should be provided for all urban development.

C. Wetlands

Principle

Wetlands perform a variety of important functions that make them invaluable resources. These functions include: supporting a wide variety of desirable and sometimes unique plant and animal life; assisting in the stabilization of lake levels and streamflows; trapping and storing plant nutrients in runoff, thus reducing the rate of enrichment of surface waters and obnoxious weed and algae growth; contributing to the atmospheric oxygen supply; contributing to the atmospheric water supply; reducing stormwater runoff by providing area for floodwater impoundment and storage; trapping soil particles suspended in runoff and thus reducing stream sedimentation; and providing the population with opportunities for certain scientific, educational, and recreational pursuits.

Standards

1. Wetland areas adjacent to streams or lakes, wetlands within areas with special wildlife and other natural values, and wetlands with an area of five acres or greater should not be allocated to any urban development except limited recreational use and should not be drained or filled. In addition, county and local units of governments may choose to also preserve all other wetlands less than five acres in size.

2. Open lands surrounding particularly important wetlands, including wetlands adjacent to streams or lakes, wetlands with special wildlife or other natural values, and wetlands with an area in excess of 50 acres, should be kept in open space uses.

D. Woodlands

Principle

Woodlands assist in maintaining unique natural relationships between plants and animals; reduce stormwater runoff; contribute to the atmospheric oxygen supply; contribute to the atmospheric water supply through transpiration; aid in reducing soil erosion and stream sedimentation; provide the resource base for the forest product industries; provide the population with opportunities for certain scientific, educational, and recreational pursuits; and provide a desirable aesthetic setting for certain types of land use development.

Standard

Woodlands of five acres or more should not be allocated to urban development except for limited recreational uses. When urban development does occur in such areas, the impact upon the woodland areas should be minimized.

E. Wildlife

Principle

Wildlife, when provided with a suitable habitat, will supply the population with opportunities for certain scientific, educational, and recreational pursuits; comprises an integral component of the life systems which are vital to beneficial natural processes, including the control of harmful insects and other noxious pests and the promotion of plant pollination; provides food sources; offers an economic resource for the recreation industries; and serves as an indication of environmental health.

Standards

1. The most suitable habitat for wildlife, that is, the area in which fish and game can best be fed, sheltered, and reproduce, is a natural habitat. Since the natural habitat for fish and game can best be achieved by preserving or maintaining in a wholesome state other resources, such as soil, air, water, wetland, and woodlands, the standards for each of these other resources, if met, would ensure the preservation of a suitable wildlife habitat and population.

2. Wildlife populations should be maintained in balance with the holding capacity of the land.

F. Environmental Corridors and Isolated Natural Resource Areas

Principle

The primary and secondary environmental corridors and isolated natural resource areas are a composite of the best individual elements of the natural resource base, including lakes, rivers, and streams and their associated floodlands; wetlands; woodlands; wildlife habitat areas; rugged terrain consisting of slopes 12 percent or greater; wet, poorly drained or organic soils; and significant geological formations. By protecting these elements of the natural resource base, flood damage can be reduced, soil erosion abated, water supplies protected, air cleansed, wildlife population enhanced, and continued opportunities provided for scientific, educational, and recreational pursuits.

Standards

1. All remaining undeveloped lands within designated primary environmental corridors[1] should be preserved in essentially natural, open use.

2. All remaining undeveloped lands within the designated secondary environmental corridors[2] and isolated natural resource areas[3] should be considered for preservation as urban development proceeds and be incorporated, as appropriate, for use as drainageways, floodwater detention areas, and parks.

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[1] *Primary environmental corridors are, by definition, at least two miles in length, 400 acres in area, and 200 feet in width.*

[2] *Secondary environmental corridors are, by definition, at least one mile in length and 100 acres in area. Such corridors that link or serve to connect primary environmental corridor segments, particularly when the secondary corridors are related to surface drainage, have no minimum area or length criteria.*

[3] *Isolated natural resource areas are, by definition, at least five acres in areas and 200 feet wide. Such areas consist primarily of isolated wetland and woodland areas which have been separated physically from the environmental corridor network by intensive urban or agricultural land uses.*

G. Prime Agricultural Lands

Principle

The preservation of prime agricultural lands[4] ensures that the most productive existing farmlands will remain available for the provision of food and fiber, contribute to the agricultural and agriculture-related economy of the area, maximize the return on capital invested in agricultural irrigation and drainage systems and soil and water conservation practices, minimize conflicts between farming operations and activities associated with urban land uses, and contribute to energy conservation since prime agricultural soils require less energy to farm than do other soils.

Standards

1. All prime agricultural lands within the Kewaskum planning area not required to meet the land use needs of the forecast design year resident population and economic activity levels should be preserved for agricultural use. These areas should be protected through the application of zoning and land division regulations that allow only agricultural uses and agriculture-related uses to occur and require a parcel size of at least 35 acres.

2. The location of nonfarm residential development in prime agricultural areas should be discouraged. If permitted, development should be limited to densities equivalent to a lot area of five acres or greater per dwelling unit, providing the locations can accommodate an acceptable private well system and are covered by soils suitable for the use of onsite sewage-disposal systems.

OBJECTIVE NO. 4—RECREATION

To provide an integrated system of public outdoor recreation sites and related open space areas that will provide the resident population of the Kewaskum planning area with adequate opportunities to participate in a wide range of outdoor recreation activities.

PRINCIPLE

The provision of outdoor recreation sites and related open space areas contributes to the attainment and maintenance of physical and mental health by providing opportunities to participate in a wide range of activities. An integrated park and related open space system properly related to the natural resource base, such as the existing surface water network, can generate the dual benefits of satisfying recreational demands in an appropriate setting and protecting and preserving valuable natural resource amenities. Finally, an integrated system of outdoor recreation sites and related open space areas can contribute to the orderly growth of the planning area by lending form and structure to urban development patterns.

A. Public Outdoor Recreation Sites and Facilities

Principle

Public, general-use, outdoor recreation sites promote the maintenance of proper physical and mental health both by providing opportunities to participate in such athletic recreational activities as baseball, swimming, tennis, and ice-skating, activities that facilitate the maintenance of proper physical health because of the exercise involved, as well as opportunities to participate in such less athletic activities as pleasure walking, picnicking, or just rest and reflection. These activities tend to reduce everyday tensions and anxieties and thereby help maintain proper physical and mental well-being. Well designed and properly located public general-use outdoor recreation sites also provide a sense of community, bringing people together for social and cultural as well as recreational activities, and thus contribute to the desirability and stability of residential neighborhoods and of the communities in which such facilities are provided.

Standard

Local governments should provide recreation sites sufficient in size and number to meet the recreation demands of the resident population. Such sites should contain the natural resource or human-made amenities appropriate to the recreational activities to be accommodated therein and be spatially distributed in a manner which provides ready access by the resident population. To achieve this standard, the site and facilities requirements indicated in Tables 22 and 23, as well as the service radius and travel distance standards established in Table 20, should be met.

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[4] *Prime agricultural lands have been identified by the Regional Planning Commission as those areas that meet the following criteria: 1) the farm unit must be at least 35 acres in area, 2) at least 50 percent of the farm unit must be covered by soils which meet U. S. Natural Resources Conservation Service National standards for prime farmland, largely Class I and II soils, or farmland of statewide importance, largely Class III soils, and 3) the farm unit should be located in a block of farmland at least 100 acres in size.*

Table 23

NEIGHBORHOOD OUTDOOR RECREATIONAL FACILITY STANDARDS FOR THE VILLAGE OF KEWASKUM URBAN SERVICE AREA

Facility[a]	Minimum Public Facility Requirements			
	Facility per 1,000 Residents	Number of Facilities Required[b]	Acreage Required per Facility	Total Acreage Required[c]
Active Recreation				
Softball Diamond	0.53	3	2.5	7.5
Basketball Goal	0.91	6	0.1	0.6
Ice Skating Rink	0.15	1	0.3	0.3
Playfield	0.39	3	1.7	5.1
Playground	0.35	2	0.6	1.2
Tennis Court	0.50	3	0.3	0.9
Subtotal	--	-	--	15.6
Passive Recreation Area[d]	Add 25 percent of active recreation area total			3.9
Total	--	--	--	19.5[e]

[a]Larger facilities, such as official baseball diamonds, swimming pools, and areas for nature study should, be provided at community parks. Also, support facilities such as parking, night lighting, concessions, and bleachers are generally provided in community parks and not neighborhood parks. The latter sites typically do not contain sufficient acreage to allow for adequate buffer between such support facilities and surrounding neighborhood residences.

[b]Based on an assumed neighborhood population of 6,500 persons, a neighborhood resident population could range from 4,000 to 8,000 persons. In medium-density residential areas, neighborhoods of 6,500 residents are generally about one square mile in area; in low-density residential areas, neighborhoods of 6,500 residents are generally about four square miles in area.

[c]Natural areas should be incorporated into the design of a park site; however, acreages of areas with steep slopes, poor soils, floodlands, drainageways, wetlands, and woodlands should be considered as additions to the park-school acreage standard.

[d]Passive recreation area provides opportunity for less intensive recreational pursuits, such as pleasure walking, relaxation, and picnicking. Such areas are located in parks consisting of landscaped areas with mowed lawns, shade trees, benches, and picnic tables.

[e]The values listed in this table are for accommodating only outdoor recreational facilities in a combined neighborhood park and elementary school site, exclusive of the natural areas and the area required for the school building and associated parking and loading facilities.

Source: SEWRPC.

B. Recreation-Related Open Space

Principle

Effective satisfaction of recreation demands within the Region cannot be accomplished solely by providing general-use outdoor recreation sites. Certain recreational pursuits, such as hiking, biking, and cross-country skiing are best provided through a system of recreation corridors located on or adjacent to linear resource-oriented open space lands. Resource-oriented outdoor recreational activities rely on natural resource amenities for their very existence or are significantly enhanced by the presence of natural features. A well-designed system of recreation corridors offered as an integral part of linear open space lands also can serve to connect existing and proposed public parks, thus forming a truly integrated park and recreation-related open space system. Such open space lands, in addition, satisfy the human need for natural surroundings, serve to protect the natural resource base, and ensure that many scenic areas and areas of natural, cultural, or historic interest assume their proper place as form determinants for both existing and future land use patterns.

STANDARDS

The public sector should provide sufficient open space lands to accommodate a system of resource-oriented recreation corridors to meet the resident demand for extensive trail-oriented recreational activities. To fulfill these requirements, the following standards should be met:

1. Resource-oriented recreation corridors should maximize use of environmental corridors for extensive trail-oriented recreation activities, outdoor recreation facilities provided at existing public park sites, and existing recreational trail facilities.

2. The maximum vehicular travel distance to major recreation corridors should be five miles in urban areas and 10 miles in rural areas. Local recreation corridors should be conveniently accessible to residents in neighborhood units. These corridors should also function as a parkway system that interconnects local parks, and that ultimately connects to a major recreation corridor.

3. A minimum of 0.16 linear mile of recreation-related open space consisting of linear major recreation corridors should be provided for each 1,000 persons in the Region, including those in the Kewaskum planning area. No minimum size requirements are necessary for creating linear recreation corridors; however, a width of at least 200 feet is recommended to the extent practicable. There is no minimum length requirement for the provision of local recreation corridors since such corridors should be provided whenever possible.

OBJECTIVE NO. 5—TRANSPORTATION SYSTEM

To provide an integrated transportation system which, through its location, capacity, and design, will effectively serve the travel demand generated by the existing and proposed land uses.

PRINCIPLE

An integrated area transportation system serves to interconnect freely the various land use activities in neighborhoods, communities, counties, and Region, thereby providing the accessibility needed to support these activities.

STANDARDS

1. Arterial streets and highways and supporting local and minor streets should provide access, not only to all land currently devoted to urban use, but also to land planned for such use. All streets and highways in the Kewaskum planning area should be placed into one of the following functional classifications:

   Minor Land-Access Streets: This subsystem provides access to and from individual building sites.

   Collector Streets: This subsystem collects traffic from urban uses abutting land access streets and conveys it to arterial streets and to activity centers.

   Arterial Streets: This subsystem provides for the expeditious movement of through traffic into, out of, and within the community. Where possible, arterial streets should not be located through existing or planned residential neighborhoods.

Streets and highways in the Village of Kewaskum should be improved to cross-sections that are similar to the Village's preferred cross-sections, shown in Figure 4 in the street design guideline section of this chapter.

2. Off-street parking and loading facilities should be located near the land uses which they are to serve.

3. Bicycle and pedestrian facilities should be provided as part of an overall transportation system plan to reduce air pollution, reduce energy consumption, encourage outdoor recreational pursuits, improve public health, reduce transportation cost, and provide for convenient travel between residential areas and shopping centers, schools, parks, and transit facilities within or adjacent to neighborhoods. Community bicycle and pedestrian facilities plans should be based, in part, on the planning and design standards established for such facilities in SEWRPC Planning Report No. 43, A Regional Bicycle and Pedestrian Facilities System Plan for Southeastern Wisconsin: 2010.

OBJECTIVE NO. 6—FIRE PROTECTION

To provide facilities necessary to maintain high-quality fire protection throughout the Village.

PRINCIPLE

The adequacy of fire protection in the urban service area is dependent upon the relationship between the distribution of urban land uses and the location of facilities available to serve those urban uses.

STANDARDS

1. Fire stations and equipment should be based, in part, on the fire protection service guidelines provided in the most recent edition of a document published by the Insurance Services Office (ISO) entitled Fire Suppression Rating Schedule.

1. 2. A fire station service area should be based on the following fire equipment service area standards: two and one-half "road miles," response distance lines, for a ladder company for areas containing five or more three-story buildings and one and one-half "road miles" for an engine company.[5] The fire protection service area or response district of an engine or ladder company, which must be housed in a fire station, is measured by the length of streets, "road miles," in all directions from a fire station. The distance standards should be reduced if streets are narrow or in poor condition; if traffic, one-way streets, topography, railroad crossings, waterways, or other unusual locational conditions may hinder response; or if other circumstances peculiar to the particular response district or municipality indicate that such a reduction is needed.

OBJECTIVE NO. 7—LIBRARY SERVICES

To provide a full range of library services to meet the social, educational, informational, and recreational needs of the residents of the Kewaskum area.

PRINCIPLE

The provision of adequate library facilities and services are an important component of the necessary educational and recreational opportunities that should be accessible to every person residing within a library's service area to ensure the social well-being of an area.

STANDARDS

1. To assure the efficient and effective provision of library services to all residents of the Kewaskum area, the location of library facilities should be based, in part, on the standards established in Table 20. Community libraries should be planned, at a minimum, to meet the State's most recent library standards including those specified in Wisconsin Library Building Project Handbook, 1990; Public Library Space Needs: A Planning Outline, 1988; and Wisconsin Public Library Standards, 1987, published by the Wisconsin Department of Public Instruction.

2. Library facilities should be located at or near community shopping centers or other points of concentrated pedestrian activity adjacent to the intersection of two arterial streets for both visibility and convenience.

3. A community library should have interlibrary resource and service exchange agreements with public, school, academic, and special libraries within its service area and with other systems in the Region, as well as access to the resources of State- and Federal-level libraries through the interlibrary network.

OBJECTIVE NO. 8—HOUSING

The provide adequate location and choice of housing and housing types for varied age and income groups of different size households.

PRINCIPAL

Adequate choice in the type, size, cost, and location of housing units will assure equal housing opportunity.

STANDARDS

1. Housing units in the Kewaskum urban service area should be geographically well distributed and include a full range of housing types, sizes, and costs, including manufactured housing, detached single-family homes, two-family homes, multi-family rowhouses and townhouses, and multi-family apartments and condominiums.

2. The supply of vacant and available housing units should be sufficient to maintain and facilitate ready housing consumer turnover. Vacancy rates should be maintained at a minimum of 4 percent and a maximum of 6 percent for rental units and a minimum of 1 percent and a maximum of 2 percent for homeowner units in a full range of housing types, sizes, and costs.

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[5] *The need for an additional engine company and/or ladder company should be further based on the number of hydrants or amount of lineal length of streets in a fire protection service area. For example, the total amount of hydrants or lineal length of streets should be determined for those lying within an existing fire station response district and for those lying within urban service areas that extend beyond this existing district. If the total number of hydrants or lineal miles of streets in the outlying urban service area exceeds 50 percent of the total number of hydrants or lineal miles of streets in the existing fire station service area, then an additional fire engine company and/or ladder company, housed in a fire station, should be provided and centrally located in the outlying urban area. For further explanation, refer to the Field Procedures Reference Guide, published by the ISO Commercial Risks Services, Inc., in January 1988.*

3. Residential densities in the Village of Kewaskum planned urban service area should generally be allocated as follows:

   a. Approximately 4 percent of the total housing units should consist of detached single-family dwelling units on lots 20,000 square feet or larger.

   b. Approximately 56 percent of the total housing units should consist of detached single-family dwelling units on 7,200- to 19,999-square-foot lots, or 2.2 to 6.0 units per net residential acre.

   c. Approximately 10 percent of the total housing units should consist of two-family dwellings at densities less than 7.4 units per net residential acre.

   d. Approximately 30 percent of the total housing units should consist of multi-family dwellings at densities equal to, or greater than, 7.4 units per net residential acre.

4. Housing units should be located in well-planned residential neighborhoods. The spatial distribution of land for various types of dwelling units in a typical medium-density residential neighborhood should be based, in part, on Table 21.

OBJECTIVE NO. 9—HISTORIC PRESERVATION

The preservation of the historical heritage of the Kewaskum area.

PRINCIPAL

The preservation of structures, sites, and districts possessing historical or architectural significance will promote the educational, cultural, and general welfare of residents of the Kewaskum area and provide for a more interesting, attractive and vital community. Accordingly, it is in the public interest to promote the protection, enhancement, perpetuation, and use of sites and improvements of special historical interest or value.

STANDARDS

1. Intensive historic surveys should be conducted in the Town and Village of Kewaskum, both of which are located within the planning area. Historic sites, buildings, and structures identified through such surveys should be protected through the establishment of a community landmarks commission or other effective means.

2. The standards promulgated by the U. S. Department of the Interior should be followed in any historic preservation projects in the Kewaskum planning area. These standards govern all forms of historic preservation treatments, including acquisition, protection, stabilization, preservation, rehabilitation, restoration, and reconstruction. The following standards should apply to all treatments undertaken on designated historic properties in the Kewaskum planning area.

   a. Every reasonable effort should be made to use a structure or site for its originally intended purpose or to provide a compatible use that requires minimal alteration of the site or structure and its environment.

   b. The distinguishing original qualities or character of a building, structure, or site and its environment should not be destroyed. The removal or alteration of any historic materials or distinctive architectural features should be avoided, whenever possible.

   c. All buildings, structures, and sites should be recognized as products of their own time. This should be considered before alterations are undertaken which have no historical basis and which seek to create an "antique" appearance.

   d. Changes which may have taken place in the course of time are evidence of the history and development of a building, structure, or site and its environment. If these changes have acquired significance in their own right, their significance should be recognized and respected.

   e. Distinctive stylistic features or examples of skilled craftsmanship which characterize a building, structure, or site should be treated with sensitivity.

   f. Deteriorated architectural features should be repaired rather than replaced, wherever possible. In the event replacement is necessary, the new material should match that being replaced in composition, design, color, texture, and other visual qualities. Repair or replacement of missing architectural features should be based on accurate duplications of features, substantiated by historical, physical, or pictorial evidence, rather than on conjectural designs or the availability of different architectural elements from other buildings or structures.

   g. The surface cleaning of structures should be undertaken with the gentlest means possible. Sandblasting and other cleaning methods that will damage historic building materials should not be undertaken.

   h. Every reasonable effort should be made to protect and preserve archaeological resources affected by, or adjacent to, any acquisition, protection, stabilization, preservation, rehabilitation, restoration, or reconstruction project.

The objectives, principles, and standards set forth in this chapter express the intent of the Village of Kewaskum regarding physical development. The standards perform a particularly important function in the plan design process, since they form the basis upon which estimates of future community land use needs are determined, as indicated in Chapter VII.

URBAN DESIGN GUIDELINES

To help direct proposed development or redevelopment activities in the Kewaskum area, basic design guidelines should be established and agreed upon. These guidelines may also serve as potential solutions to urban design problems. Specific design decisions should be based, in part, on these guidelines, as well as on the underlying objectives, principles, and standards set forth above. Design guidelines have been developed for the planning area with respect to basic urban and site planning design and central business district design. These guidelines should be used by Kewaskum officials to provide detailed guidance and to assist in the evaluation of development proposals, including site, landscaping, and building plans.

BASIC URBAN AND SITE PLANNING DESIGN GUIDELINES

Neighborhoods

Neighborhood Land Uses: Neighborhoods should be developed in a spatially organized manner around a central feature, or focal point, such as a neighborhood park or elementary school, to promote a sense of physical unity as a planned unit rather than as a single, large, formless mass. Residential neighborhoods should, in general, contain a balanced mix of various land uses, as indicated in Table 21.

Neighborhood Identification: Delineated neighborhood units, insofar as is practicable, should be bounded by arterial streets; major parks, parkways, or institutional lands; railroads; bodies of water; or other natural or cultural features which serve to define clearly and to distinguish physically each unit from the surrounding units. A name, based on a distinct land feature or land use character, including historic heritage, should be selected for each neighborhood to provide a sense of identity. Main "entryways" into neighborhoods should be well defined for identification, directional, and aesthetic purposes, as well as to instill a further sense of unity.

Neighborhood Facilities: The location and amount of land needed for neighborhood facilities should be based, in part, on the standards specified in Tables 20 and 21. Recreational lands at the neighborhood level should be centrally located to provide a focal point for neighborhood interaction and activities and should be developed in conjunction with a neighborhood elementary school. The elementary school and recreational facilities should be provided on a common site to serve the recreation demands of both the school student and the resident neighborhood population. Individual recreational facility requirements should be based upon the values listed in Table 23.

Neighborhood Access to Facilities: Residents of neighborhoods should be afforded safe and convenient access to parks, schools, shopping centers, employment centers, and other community facilities. The walking and bicycling distances to these facilities should not exceed the maximum distance standards established in Table 20. Bicycle and pedestrian ways should be connected to, or be a part of, a recreation trail system plan providing access for both utilitarian and recreational purposes. Neighborhoods should also have ready access to an arterial street system, and, thereby, to urban activities and services, through an internal network of minor and collector streets designed to facilitate vehicular circulation and bicycle and pedestrian circulation while discouraging heavy volumes of arterial traffic through the neighborhood.

Streets and Bicycle and Pedestrian Facilities[6]

Street Cross-Sections: Desirable cross-sections for streets and bicycle and pedestrian ways are

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[6]*The design guidelines set forth in this section are not intended to serve as a comprehensive guide to the design of streets and highways, including those accommodating bicycles, and sidewalks, but are intended to suggest the general type of design treatments that may be appropriate in certain situations. Precise design specification should be determined during engineering studies for specific street, highway, and bicycle way projects and should be based, in part, on the recommendations contained in the most recent edition of, A Policy on Design of Urban Highways and Arterial Streets, A Policy on Geometric Design of Rural Highways, A Geometric Design Guide for Local Roads and Streets, Guide for the Development of Bicycle Facilities, published by the American Association of State Highway and Transportation Officials, and the Manual on Uniform Traffic Control Devices, published by the U. S. Department of Transportation, Federal Highway Administration.*

shown graphically in Figure 4. Collector and minor land-access streets can generally accommodate bicycle travel without widening the roadway. It is recommended that the desirable cross-section for a collector street, which occupies a minimum right-of-way width of 80 feet, be used as the minor land-access street cross-section for industrial developments.

Street Grades: Unless necessitated by exceptional topography, the maximum grade of any street should not exceed the following: arterial streets, 6 percent; collector streets, 8 percent; and minor land-access streets, alleys, and frontage streets, 10 percent. The grade of any street should in no case exceed 10 percent. The minimum grade of any streets should preferably be 0.75 percent, and in no case be less than 0.50 percent. The minimum grade of road crowns should be 2.0 percent. The change in grade across a street intersection within 100 feet of the property line limits of an intersection should not exceed 3.0 percent, preferably 1.50 percent. In addition, the maximum grade of any street in an industrial area should not exceed 3.0 percent. All street grades should be established so as to avoid excessive grading, removal of ground cover and trees beyond what is necessary and haphazard leveling of the terrain of the topography.

Street Intersections: Streets should intersect each other at right angles as much as topography and other limiting factors of good design permit. Angles above approximately 60 degrees usually produce only a small reduction in visibility, which often does not warrant realignment closer to 90 degrees. In addition, the number of streets converging at one intersection should be held to a minimum, preferably no more than two; the location of street intersections immediately below the crest of hills should be avoided; the number of intersections along arterial streets and highways should be held to a minimum; and the distance between such intersections should generally not be less than 1,200 feet, measured from the centerline of each street. Minor street or land-access street openings onto arterial streets should be minimized to improve traffic flow and reduce traffic hazards.

Property lines at street intersections should be rounded to an arc with a minimum radius of 15 feet, or, preferably, should be cut off by a straight line through the points of tangency of an arc having a radius of 15 feet or greater. At street intersections, as a general guide, the minimum radius of curb return, where curbs are used, or of the outside edge of pavement, where curbs are not used, should be at least 15 feet or, preferably, 20 feet. This radius may need to be increased to meet the minimum turning radii of various motor vehicles, as illustrated in Figure 5.

Street Jogs: If the distance between the centerline intersections of any street and any intersecting arterial street is less than 250 feet, measured from the centerline of the intersecting streets, or less than 125 feet, measured from the centerline of other intersecting streets, then the street location should be adjusted so that the distance is increased or the connection across the intersecting street is continuous in alignment, thus avoiding a jog in the flow of traffic. Minor and collector streets need not necessarily continue across arterial streets.

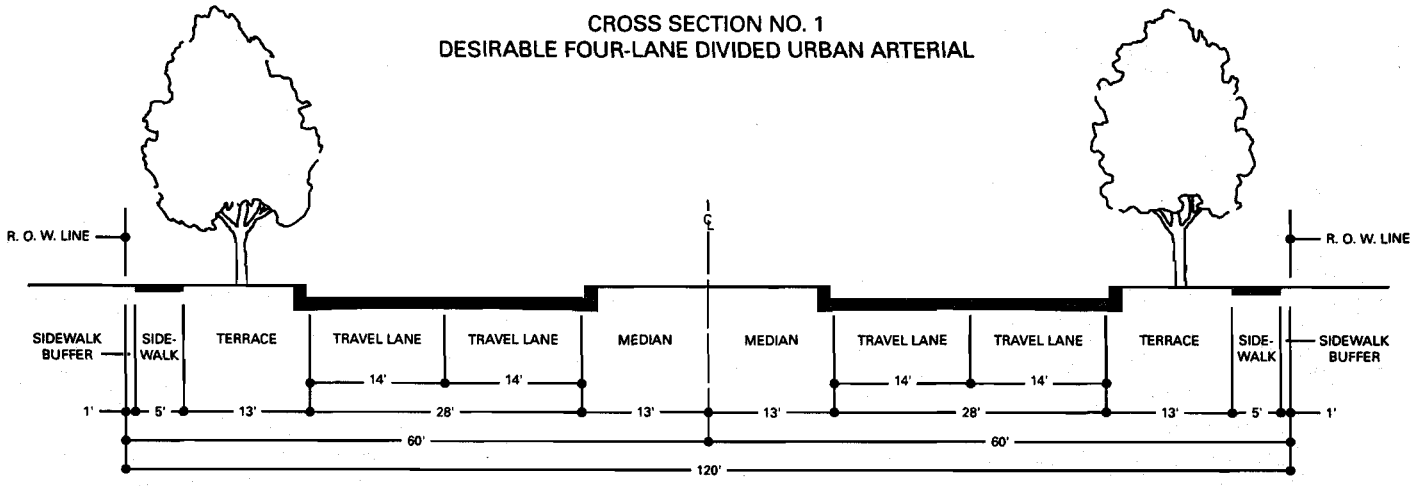
Street Curvatures: When a continuous street centerline deflects at any point by more than seven degrees, a circular curve should be introduced with a radius of curvature on the centerline of not less than the following: arterial streets, 500 feet; collector streets, 300 feet; and minor streets, 100 feet. A tangent at least 100 feet in length should be provided between reverse curves on arterial and collector streets. All changes in street grades that exceed 1 percent should be connected by vertical curves of a minimum length equivalent in feet to 30 times the algebraic difference in the rates of grade for arterial and collector streets and one-half this minimum for all other streets. Minimum curve radii should further be based on the function of traffic speed, sight distances, and other factors.

Frontage Streets: Outer separations at any intersections between arterial streets and paralleling frontage roads should be 150 feet or more in width, where practical and feasible. Narrow separations, such as 20 feet, between arterial streets and paralleling frontage roads, except at intersections, are acceptable where the frontage road traffic volume is very low, where the frontage road operates one way only, or where some movements can be prohibited. From an operational and safety standpoint, one-way frontage roads are preferred over two-way. One-way operation inconveniences local traffic to some degree, but the advantages in reduction in vehicular and pedestrian conflicts at intersection streets often fully compensates for this inconvenience. In addition, there is some saving in pavement and right-of-way width.

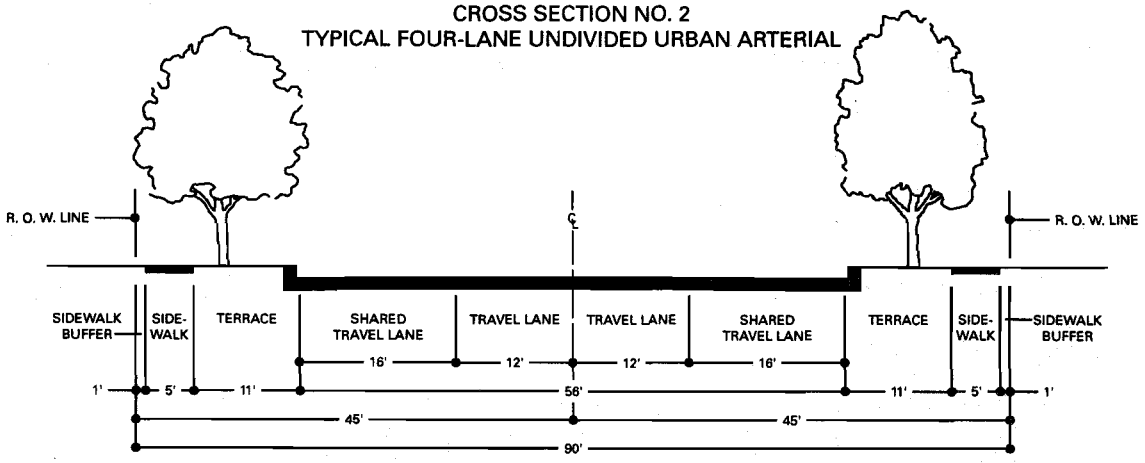
Figure 4

TYPICAL CROSS SECTIONS FOR STREETS, HIGHWAYS, BICYCLE WAYS, AND PEDESTRIAN WAYS IN THE KEWASKUM PLANNING AREA[a]

CROSS SECTION NO. 1
DESIRABLE FOUR-LANE DIVIDED URBAN ARTERIAL

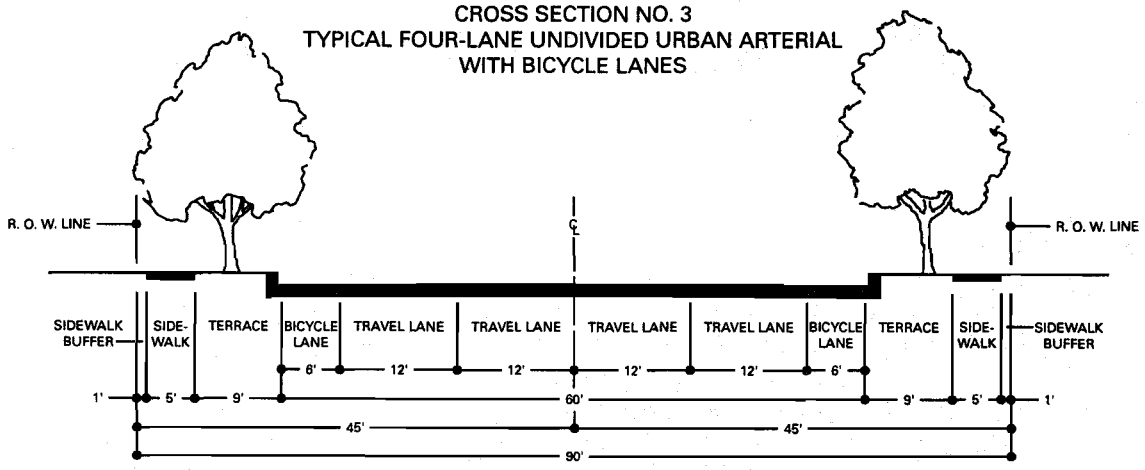


CROSS SECTION NO. 2
TYPICAL FOUR-LANE UNDIVIDED URBAN ARTERIAL



NOTE: IF THE RIGHT-OF-WAY WIDTH IS LIMITED, THEN THE TERRACE CAN BE REDUCED TO 6 FEET WIDE.

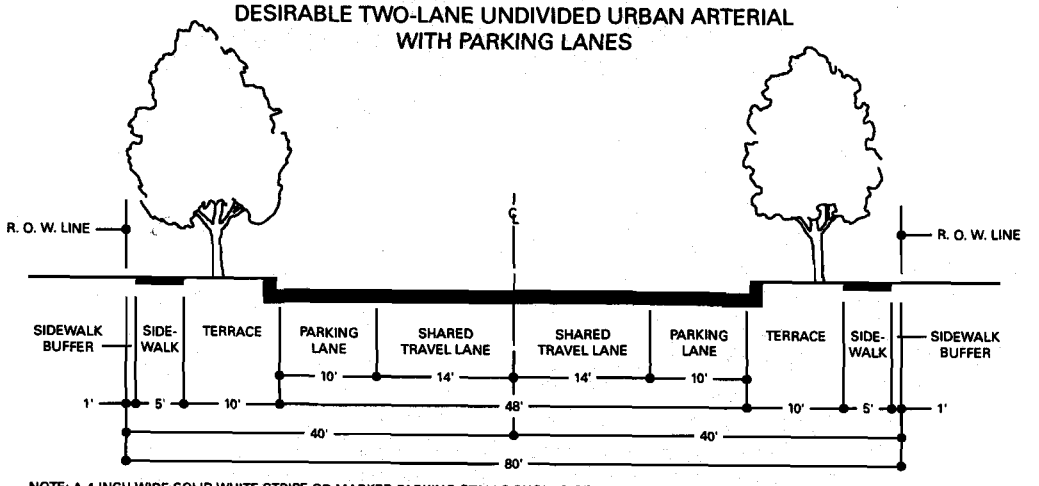
CROSS SECTION NO. 3
TYPICAL FOUR-LANE UNDIVIDED URBAN ARTERIAL
WITH BICYCLE LANES



NOTE: A 6-INCH WIDE SOLID WHITE STRIPE SHOULD BE USED TO DISTINGUISH THE OUTSIDE TRAVEL LANE FROM THE BICYCLE LANE.

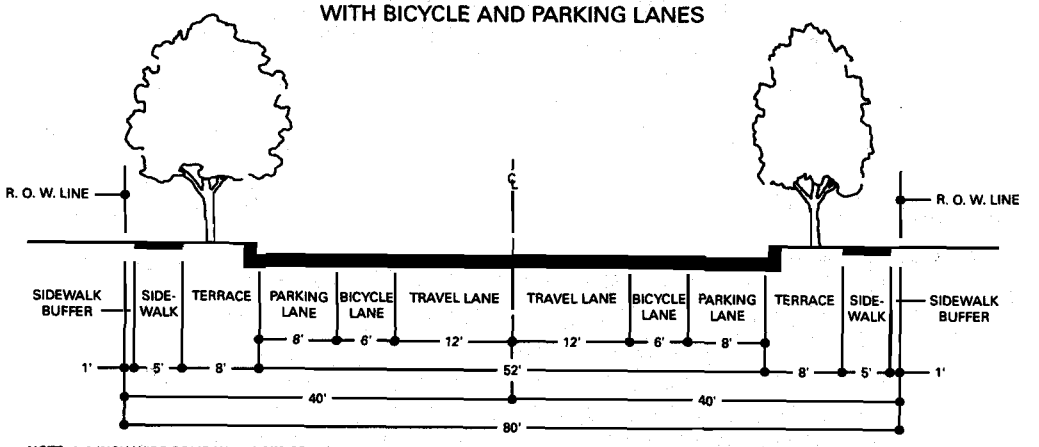
Figure 4 (continued)

CROSS SECTION NO. 4
DESIRABLE TWO-LANE UNDIVIDED URBAN ARTERIAL
WITH PARKING LANES



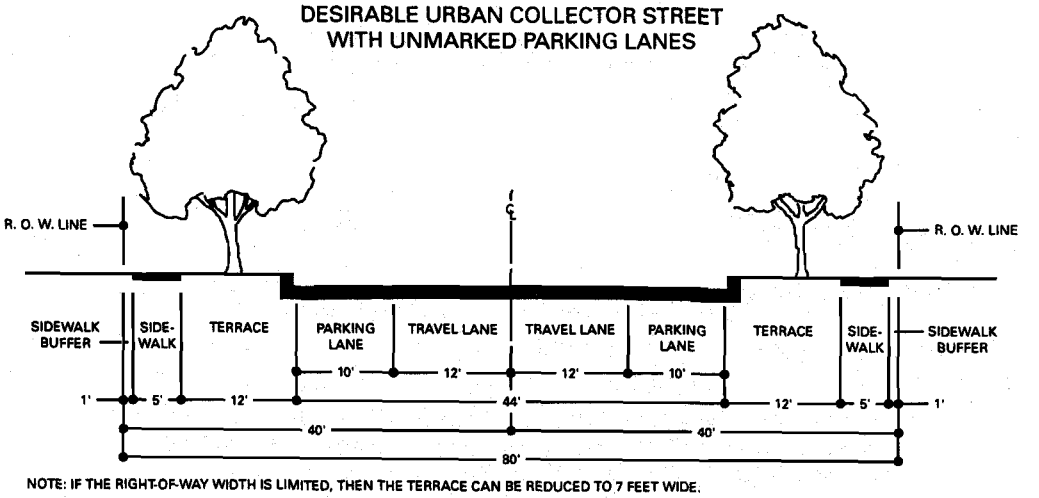
NOTE: A 4-INCH WIDE SOLID WHITE STRIPE OR MARKED PARKING STALLS SHOULD BE USED TO DISTINGUISH THE TRAVEL LANE FROM THE PARKING LANE.

CROSS SECTION NO. 5
DESIRABLE TWO-LANE UNDIVIDED URBAN ARTERIAL
WITH BICYCLE AND PARKING LANES



NOTE: A 6-INCH WIDE SOLID WHITE STRIPE SHOULD BE USED TO DISTINGUISH THE TRAVEL LANE FROM THE BICYCLE LANE. A 4-INCH WIDE SOLID WHITE STRIPE OR MARKED PARKING STALLS SHOULD BE USED TO DISTINGUISH THE BICYCLE LANE FROM THE PARKING LANE.

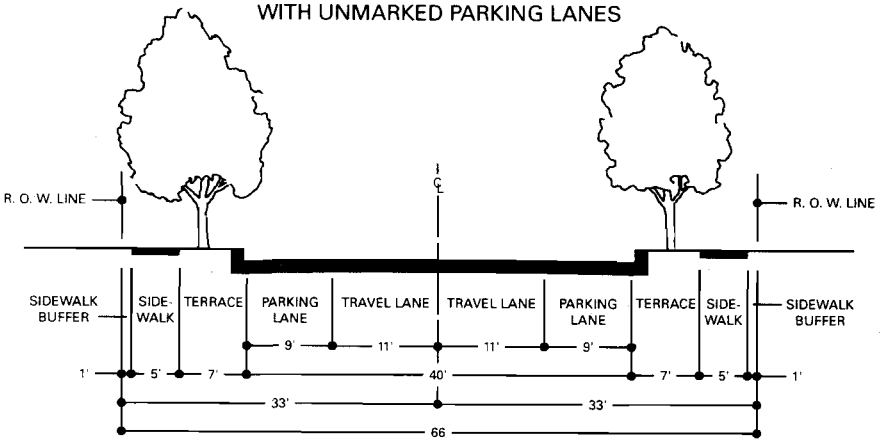
CROSS SECTION NO. 6
DESIRABLE URBAN COLLECTOR STREET
WITH UNMARKED PARKING LANES



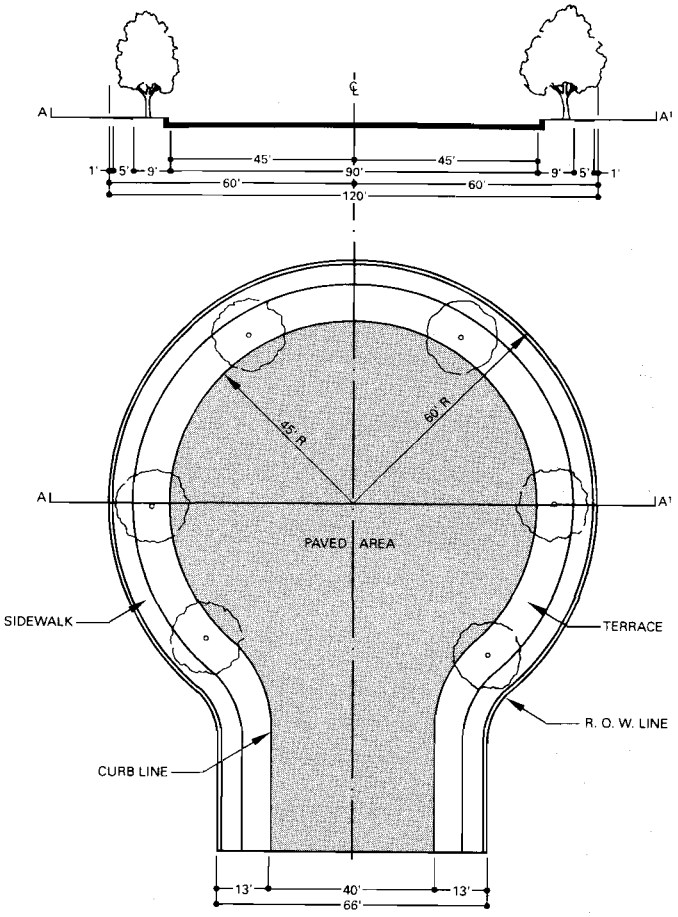
NOTE: IF THE RIGHT-OF-WAY WIDTH IS LIMITED, THEN THE TERRACE CAN BE REDUCED TO 7 FEET WIDE.

Figure 4 (continued)

CROSS SECTION NO. 7
DESIRABLE URBAN MINOR STREET
WITH UNMARKED PARKING LANES



CROSS SECTION NO. 8
"BULB" TYPE CUL-DE-SAC STREET



CROSS SECTION NO. 9[b]
"BULB" TYPE CUL-DE-SAC STREET WITH CENTER ISLAND

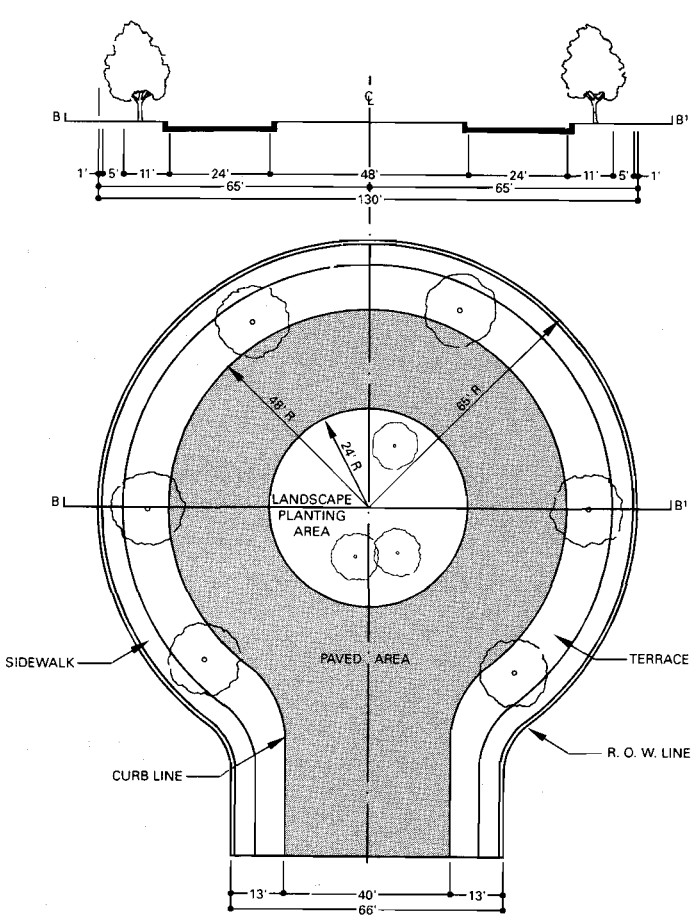
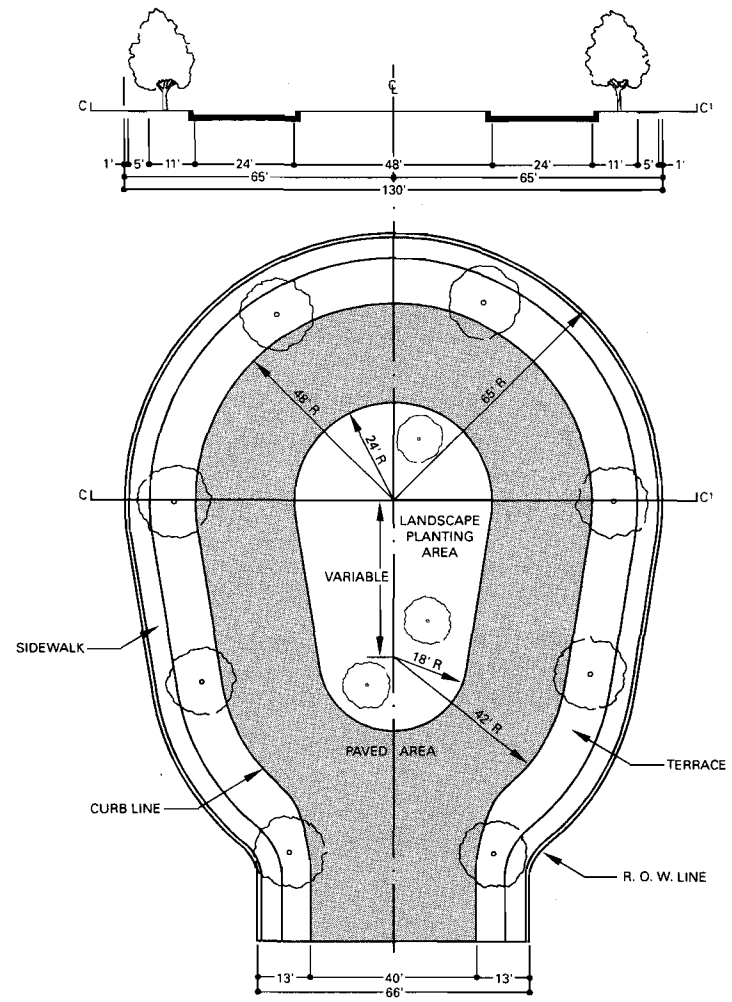
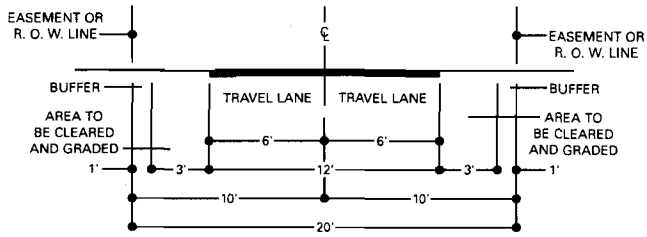


Figure 4 (continued)

CROSS SECTION NO. 10[b]
"TEAR-DROP" TYPE CUL-DE-SAC STREET
WITH CENTER ISLAND

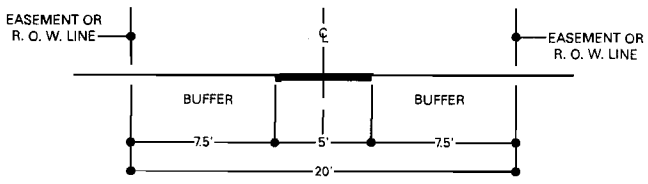


CROSS SECTION NO. 11
DESIRABLE TWO-WAY BICYCLE PATH
OUTSIDE STREET RIGHT-OF-WAY



NOTE: CENTERLINES ARE NOT NORMALLY REQUIRED ON BICYCLE PATHS. WHERE CONDITIONS SUCH AS LIMITED SIGHT DISTANCE MAKE IT DESIRABLE TO SEPARATE TWO DIRECTIONS OF TRAVEL, A DOUBLE SOLID YELLOW LINE SHOULD BE USED TO INDICATE NO PASSING OR NO TRAVELING TO THE LEFT OF THE CENTERLINE.

CROSS SECTION NO. 12
DESIRABLE PEDESTRIAN WAY



NOTE: BICYCLE AND PEDESTRIAN PATHS INTENDED FOR SHARED-USE SHOULD BE A MINIMUM OF 12 FEET IN WIDTH IF MORE THAN 50 USERS ARE EXPECTED DURING THE PEAK-USE HOUR. A MINIMUM 10 FOOT WIDE PATH SHOULD BE PROVIDED FOR SHARED-USE WHERE FEWER USERS ARE ANTICIPATED.

[a] THE VILLAGE OF KEWASKUM'S PREFERRED CROSS-SECTIONS SHOWN IN THIS FIGURE ARE, IN ALL CASES, TYPICAL, AND ARE SUBJECT TO VARIATIONS WITH REGARD TO A NUMBER OF CONSIDERATIONS, INCLUDING TOPOGRAPHY, TRAFFIC PATTERNS AND VOLUMES, TRAFFIC AND PARKING LANE WIDTHS, RIGHT-OF-WAY WIDTHS, AND ADJACENT LAND USES. NECESSARY VARIATIONS SHOULD BE DETERMINED DURING PRELIMINARY ENGINEERING STUDIES FOR SPECIFIC STREET AND HIGHWAY PROJECTS. THESE CROSS-SECTIONS ARE SHOWN IN ORDER TO PROVIDE THE APPROPRIATE JURISDICTIONAL AGENCIES AND LOCAL OFFICIALS WITH AN INDICATION BOTH OF THE AMOUNT OF RIGHT-OF-WAY THAT SHOULD BE CONSIDERED FOR RESERVATION TO ACCOMMODATE THE REQUIRED NUMBER OF TRAFFIC LANES, AND OF WHAT PAVEMENT WIDTHS ARE BEING SUGGESTED AS A STARTING POINT FOR ENGINEERING STUDIES.

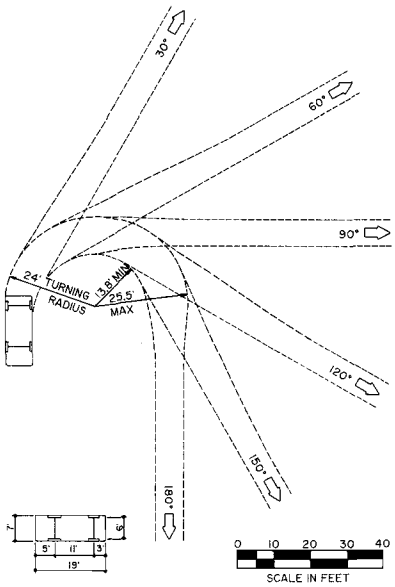
[b] EVEN THOUGH THE VILLAGE PREFERS CUL-DE-SAC TURNAROUNDS WITHOUT LANDSCAPED ISLANDS, THE VILLAGE DETERMINED THAT SUCH ISLANDS COULD BE PROPOSED IN THE TURNAROUND PROVIDED THEY ARE PROPERLY MAINTAINED BY PRIVATE MEANS SUCH AS A SUBDIVISION ORGANIZATION.

Source: SEWRPC.

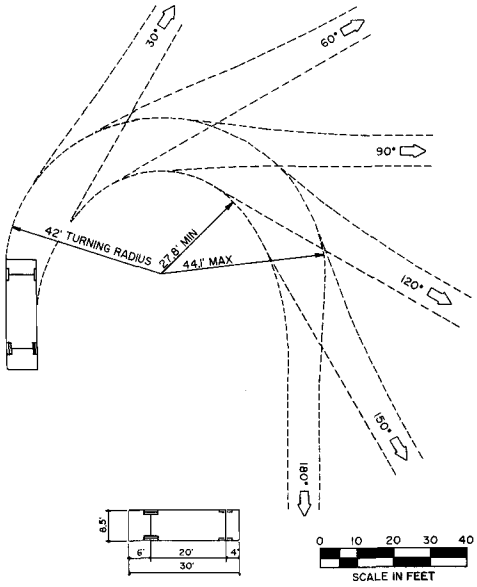
Figure 5

TURNING RADII OF SELECTED MOTOR VEHICLES

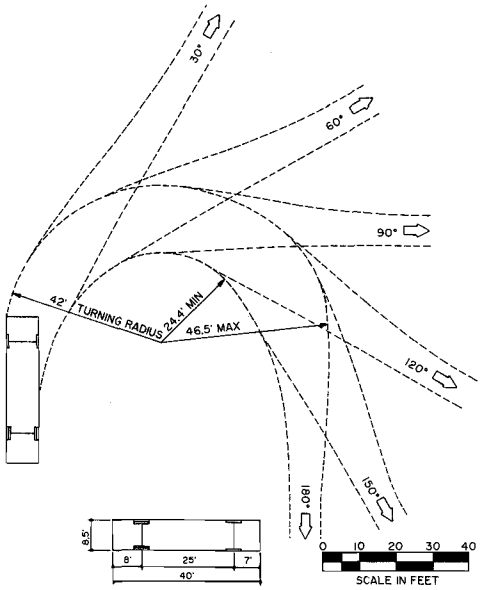
A. PASSENGER CAR



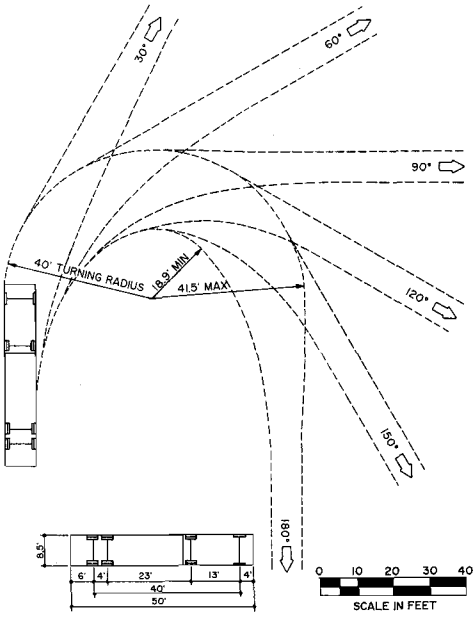
B. SINGLE-UNIT TRUCK



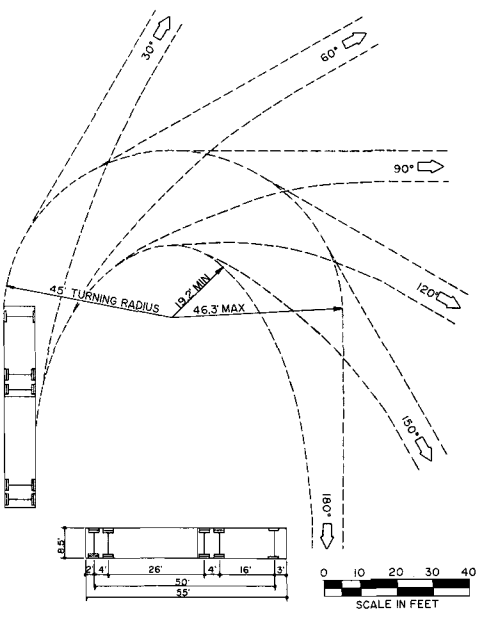
C. 40-FOOT-LONG BUS



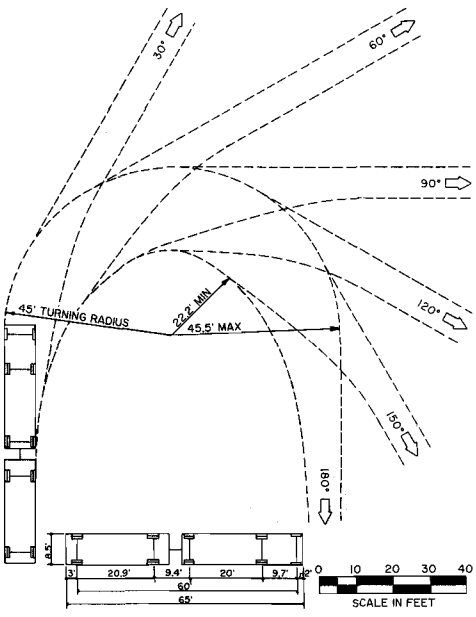
D. 50-FOOT-LONG INTERMEDIATE SIZE SEMITRAILER COMBINATION TRUCK



E. LONG LARGE-SIZE SEMITRAILER COMBINATION TRUCK



F. 65-FOOT-LONG SEMITRAILER-FULL TRAILER COMBINATION TRUCK



NOTE: The turning templates show the turning paths of the AASHTO design vehicles. The paths shown are for the left front overhang and the outside rear wheel. The left front wheel follows the circular curve, however, its path is not shown.

Source: American Association of State Highway and Transportation Officials (AASHTO).

Half-Streets: The platting of half-streets should be avoided. Half-streets put an unrealistic reliance on the chance that adjacent property owners will develop their adjacent properties at the same time. If half streets are allowed and then improved, their narrow width may result in street maintenance and traffic circulation problems.

Cul-de-Sac Streets: To minimize potential speeding and mid-street turnarounds, the length of streets designed to have one end permanently closed with a turnaround should not exceed 750 feet, measured from the center of the turnaround to the other end. Cul-de-sac streets should terminate in a circular turn-around, as shown in Figure 4.

Curb Ramps: Curb ramps should be provided in accordance with the Americans with Disabilities Act and with Section 66.616 of the Wisconsin Statutes.

Bicycle and Pedestrian Facilities: Bicycle ways[7] and pedestrian facilities should be provided for safe and convenient access to activity centers and place of employments. The provision of such facilities should be based, in part, on Figure 5 and the planning and design standards established in SEWRPC Planning Report No. 43, A Regional Bicycle and Pedestrian Facilities System Plan for Southeastern Wisconsin: 2010, which includes specific design guidelines, such as desirable grades, sight distances, pavement widths, crosswalks, and other standards. Off-street bicycle and pedestrian ways should be provided to connect cul-de-sac streets and adjacent streets across blocks 900 feet long or longer; they should be provided to connect adjacent subdivisions, subdivisions and activity centers, and activity centers and employment centers where alternative on-street routes are unduly circuitous. Examples of site designs which facilitate bicycle and pedestrian travel are illustrated in Figure 6.

Vehicular Access

Access and Street Intersections: Driveways on corner lots should be set back sufficiently from intersecting streets so that they do not interfere with traffic movement. The corner clearance between new direct public or private access and an arterial street intersection should be a minimum of 115 to 230 feet or, preferably, 250 feet, where land parcel size permits, as illustrated in Figure 7. The clearance distance is defined as the distance between the nearest face of curb or edge of pavement of the intersecting street and the nearest face of curb or edge of pavement of the nearest access point upstream or downstream of the intersection.

Arterial Highway Access Barriers: Deed restrictions and physical barriers, such as curbing, fencing, plantings, berms, or other landscape barriers, should be provided to prevent undesirable vehicular access to arterial streets or highways and to channelize traffic movements properly and safely. When plantings are used as an access barrier, the width of the landscaped area should be a minimum of 10 feet. If berms are used as barriers, the width of the landscaped area should be able to accommodate the size of the berms, based on their slope, crown, height, and form. When structural barriers are used, the minimum width of landscaping could be five feet, preferably wider, with trees and shrubs provided between the structure and adjacent right-of-way. Where applicable, openings should be provided in the barriers for convenient bicycle and pedestrian access to adjacent streets. Also, the vision clearance triangle standards discussed here should be observed. Figure 8 illustrates alternative landscaping methods for barriers and parking lot screening.

Reverse-Frontage Lots to Limit Arterial Highway Access: Reverse-frontage lots should be located adjacent to arterial streets or highways to limit vehicular access from abutting land uses. A minimum 30-foot-wide landscaped buffer strip should be provided, with deed restrictions against access along the rear property lines of residential reverse-frontage lots, as shown in Figure 9. Normal lot depths should be increased by the width of the buffer strip.

Looped Land-Access Streets and Drives: Looped land-access streets and shared drives should be

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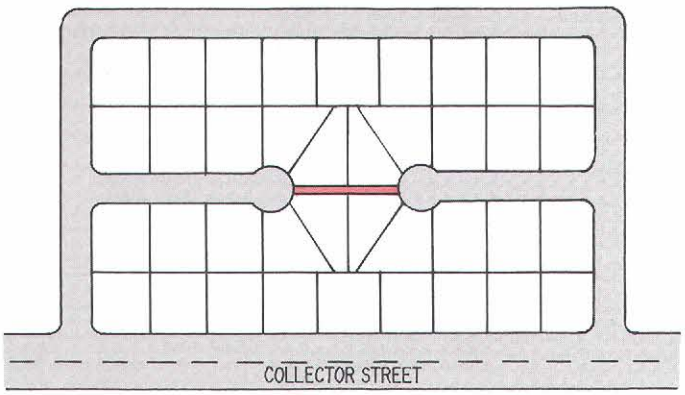
[7] *"Bicycle way" is a general term that includes any road, path, or way that may legally be used for bicycle travel. Types of bicycle ways include "bicycle paths," which are physically separated from motorized vehicles; "bicycle lanes," which are portions of roadways that are designated by striping, signing, and pavement markings for the exclusive or preferential use of bicycles; and "shared roadways," which are roadways that do not have a designated bicycle lane but may be legally used for bicycle travel. A "bike route" is a bicycle way designated with directional and information markers and may consist of a combination of bicycle paths, bicycle lanes, and shared roadways.*

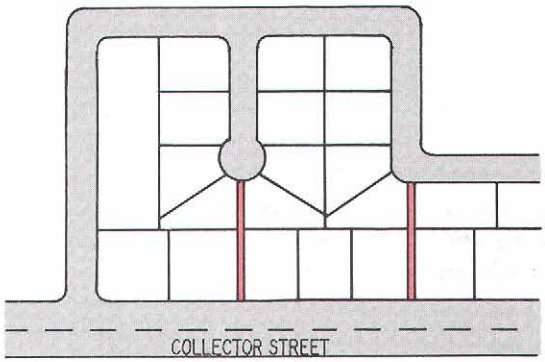
Figure 6

EXAMPLES OF SITE DESIGNS WHICH FACILITATE BICYCLE AND PEDESTRIAN TRAVEL

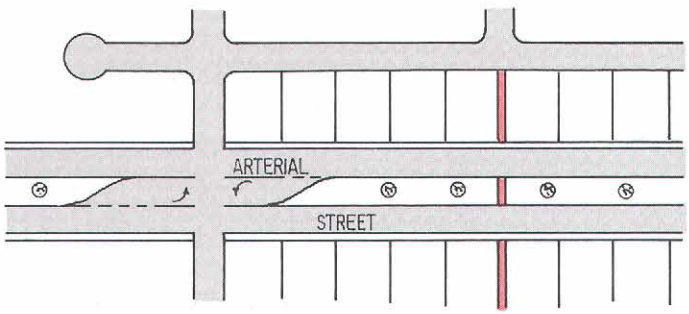
A. BICYCLE AND PEDESTRIAN CONNECTION BETWEEN CUL-DE-SAC STREETS



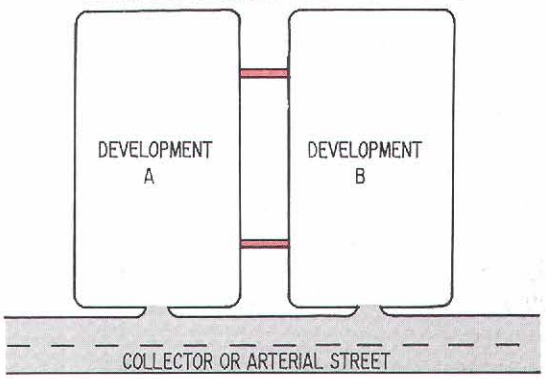
B. BICYCLE AND PEDESTRIAN CONNECTIONS ACROSS BLOCKS



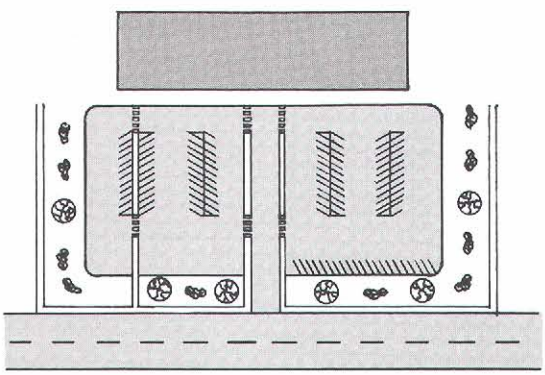
C. BICYCLE AND PEDESTRIAN CONNECTIONS ACROSS BLOCKS AND MEDIANS



D. BICYCLE AND PEDESTRIAN CONNECTIONS BETWEEN ADJACENT DEVELOPMENTS



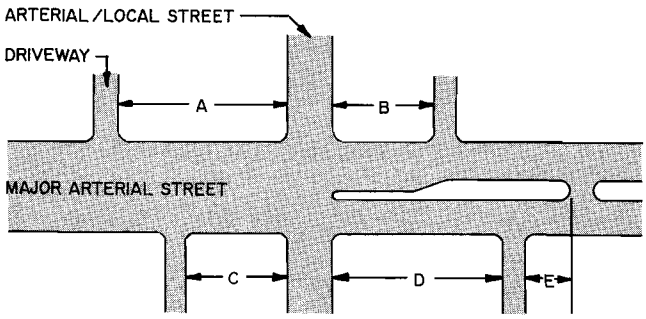
E. DESIGN OF PARKING LOT TO FACILITATE BICYCLE AND PEDESTRIAN ACCESS (WHERE PARKING CANNOT BE LOCATED TO REAR OF BUILDING)



Source: Oregon [State] Department of Transportation and SEWRPC.

Figure 7

DESIRABLE MINIMUM CORNER CLEARANCES AT SIGNALIZED AND UNSIGNALIZED STREET INTERSECTIONS



INTERSECTION OF MAJOR ARTERIAL AND ARTERIAL/LOCAL STREET CONTROLLED BY TRAFFIC SIGNAL

Key	Corner Clearance (feet)
A	230
B	115
C	230
D	230
E	150

INTERSECTION OF MAJOR ARTERIAL AND ARTERIAL/LOCAL STREET CONTROLLED BY STOP SIGNS ON ARTERIAL/LOCAL STREET

Key	Corner Clearance (feet)
A	115
B	115
C	85
D	115
E	150

Source: Institute of Transportation Engineers and SEWRPC.

used, when feasible, to help reduce the number of driveway intersections along an arterial in commercial areas, as illustrated in Figure 10.

Alignments and Shared-Use of Driveways: Land-access driveways should intersect each other and streets at right angles as nearly as topography and other limiting factors of good design permit. Driveway entrances along both sides of an arterial should be aligned as illustrated in Figure 11 to help reduce the number of driveways needed and to limit some of the confusion caused by unaligned driveways. Also, the use of shared driveways and parking lots between compatible land uses should be promoted, as shown in Figure 11. In such cases, the driveway centerline may be the property line between two parcels of land or may be located within a mutually agreed-upon land-access easement.

Driveway Design for Entering Vehicles: Driveway design along arterial streets should allow an entering vehicle a turning speed of 15 miles per hour to help reduce interference with through arterial street traffic. Driveway design and placement should be in coordination with internal site circulation and off-street parking design so that the driveway entrance to the site can absorb the maximum expected rate of inbound traffic during a normal peak-traffic period. Driveway widths should also be based on the minimum turning radii required for the types of vehicles entering and exiting the premise. In general, driveway widths at street right-of-way lines should not exceed 24 feet for residential land uses, 30 feet for commercial land uses, and 40 feet for industrial land uses.

Driveway Spacing: Driveway spacing should be determined as a function of street operating speeds. The minimum spacing between access driveways along an arterial street or highway should be determined according to Table 24. These spacings are based on average vehicle acceleration and deceleration rates and are considered necessary to maintain safe traffic operation.

Maximum Number of Driveways per Parcel: Generally, where abutting street frontage is less than 400 feet along arterial streets and highways, a maximum of one driveway opening may be permitted to a particular site, except reverse-frontage lots, from each of any one or two abutting arterial streets and highways. One additional driveway entrance along a single continuous parcel of land with frontage in excess of 400 feet should be permitted. When a shared driveway is used, it should be considered as a single direct-access driveway.

Traffic Visibility

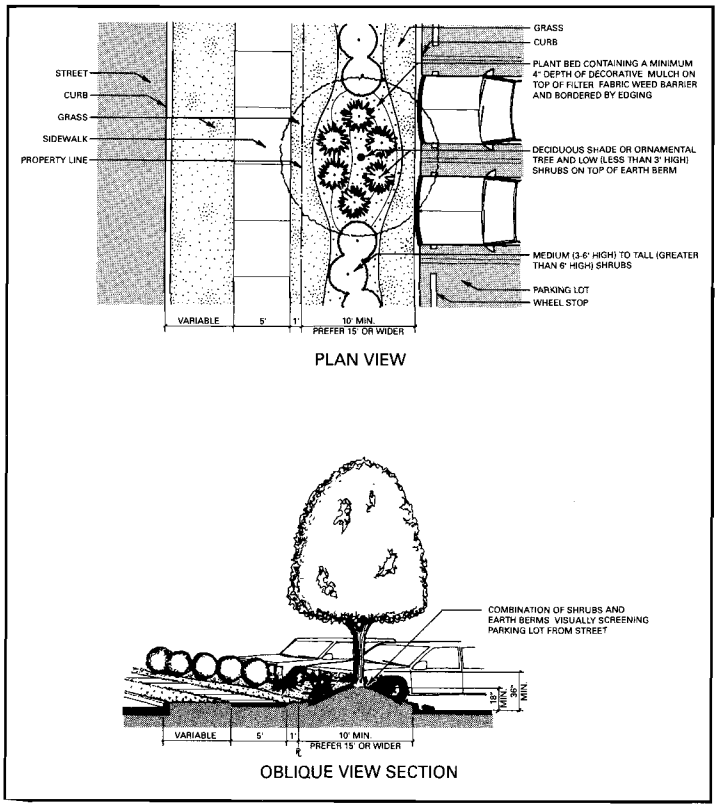
Sight Distance and Driveway Placement: Direct-access driveway placement on abutting arterial streets and highways should be such that an exiting vehicle has a minimum unobstructed sight distance listed in Table 25 for the operating design speed of the abutting arterial street or highway.

Vision Triangles: A vision clearance triangle should be provided in which minimal obstructions, such as structures, vegetation, and automobiles, are allowed

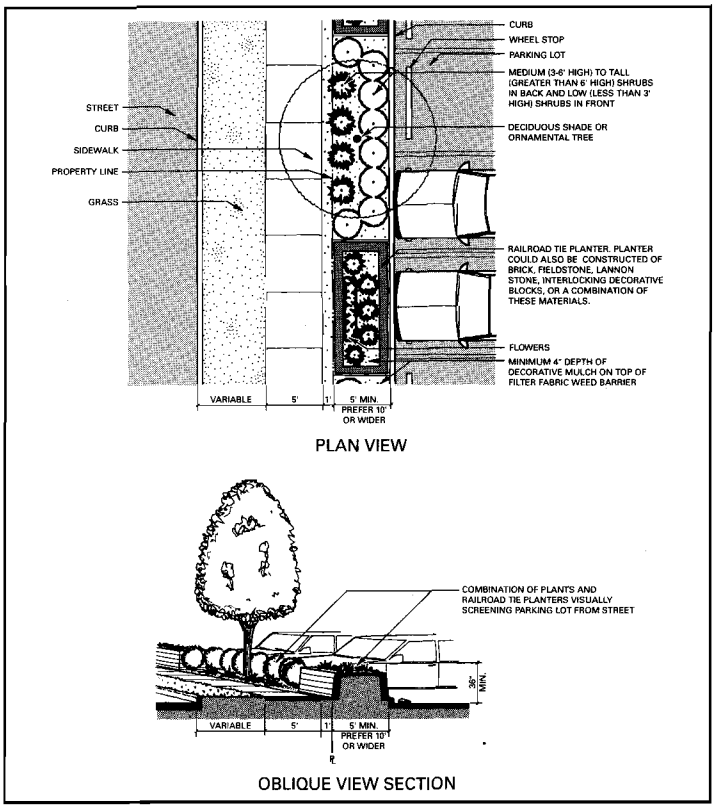
Figure 8

ALTERNATIVE LANDSCAPING FOR HIGHWAY ACCESS BARRIERS AND PARKING LOT SCREENING

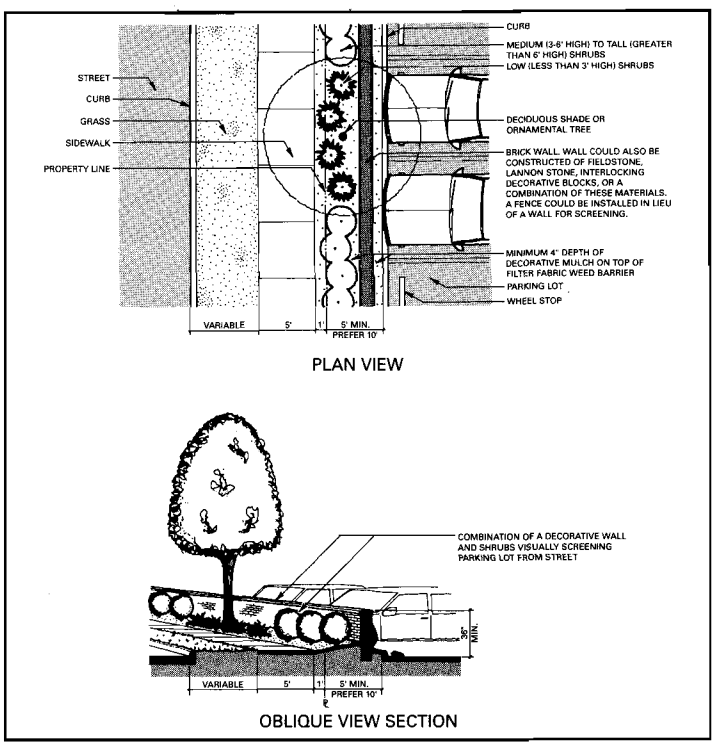
A. SCREENING WITH BERMS AND PLANTS



B. SCREENING WITH PLANTS AND PLANTERS



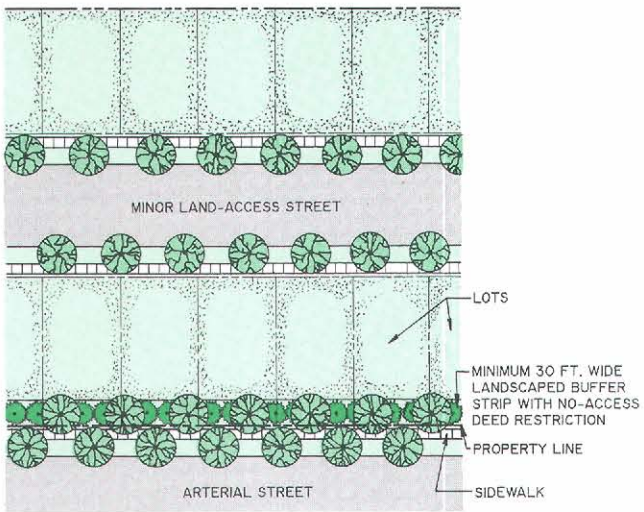
C. SCREENING WITH WALL AND PLANTS



Source: SEWRPC.

Figure 9

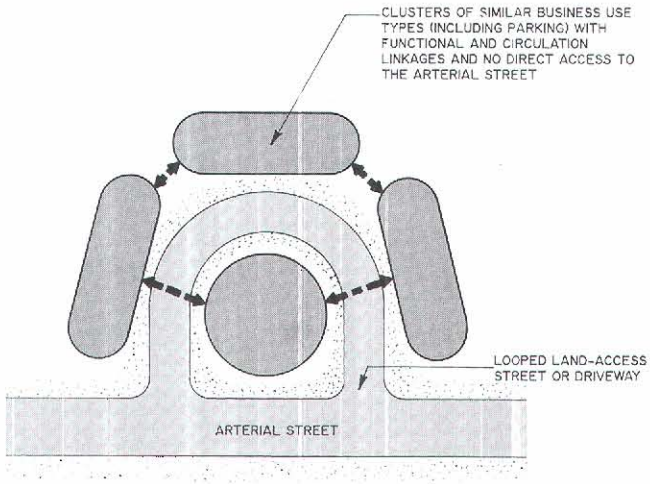
REVERSED-FRONTAGE LOTS TO LIMIT VEHICULAR ACCESS TO ARTERIAL STREETS



Source: SEWRPC.

Figure 10

DESIRABLE LOOPING OF DRIVEWAYS AND LAND-ACCESS STREETS IN COMMERCIAL AREAS



Source: SEWRPC.

Table 24

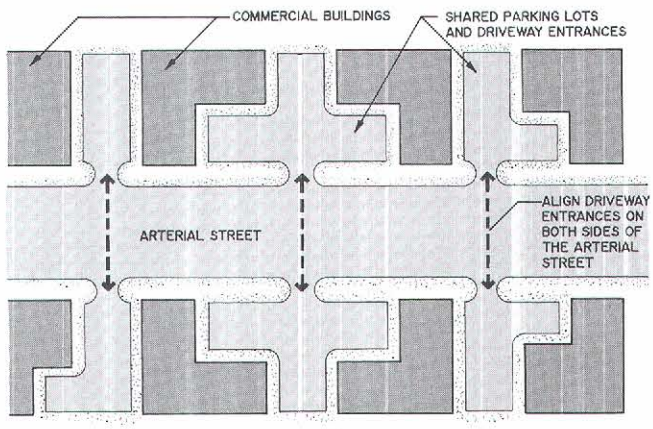
HIGHWAY OPERATING SPEED AND MINIMUM SPACING BETWEEN DIRECT-ACCESS DRIVEWAYS

Highway Speed Limit (mph)	Minimum Spacing (feet)
25	105
30	125
35	150
40	185
45	230
50	275

Source: American Planning Association and the Wisconsin Department of Transportation.

Figure 11

DESIRABLE ALIGNMENT AND SHARED USE OF DRIVEWAYS AND PARKING LOTS IN COMMERCIAL AREAS



Source: SEWRPC.

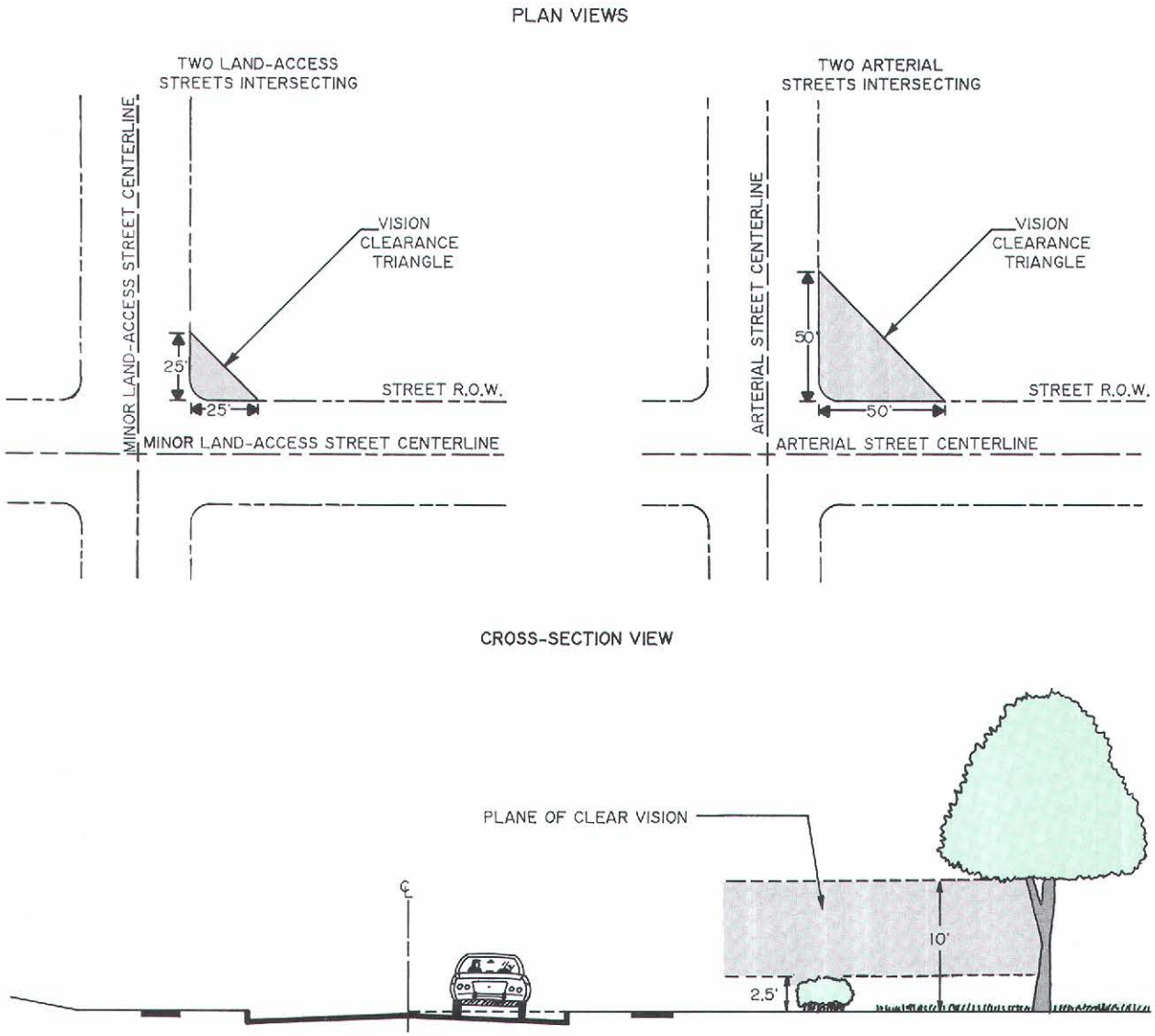
between two and one-half and 10 feet above the mean curb grade adjacent to the triangular space formed by intersecting minor land-access street right-of-way lines and a line joining points on such lines at a point 25 feet from their intersection, as shown in Figure 12. In the case of any streets intersecting arterial streets and railroads, the corner cutoff distances establishing the vision clearance triangle should be increased to 50 feet, as illustrated in Figure 12. Single-trunk trees and pole signs may be permitted within the vision triangle, provided the bottom of the tree canopy and the sign face are at least 10 feet above the adjacent mean curb grade.

Blocks

General: The widths, lengths, and shapes of blocks should be suited to the planned use of the land; subdivision ordinance requirements; the need for convenient access, control, and safety of

Figure 12

VISION CLEARANCE TRIANGLE



Source: SEWRPC.

street traffic; and the preservation of, and minimal adverse impact upon, natural resource features, including the limitations and opportunities provided by topography.

Length: Blocks in residential areas should not be less than 600 feet nor generally more than 1,500 feet in length unless otherwise dictated by the preservation of natural resource features, including exceptional topography or other limiting factors of good design.

Mid-Block Bicycle and Pedestrian Ways: Bicycle and/or pedestrian ways should be provided near the center of, and entirely across, any block exceeding 900 feet in length to provide adequate pedestrian and bicycle circulation and access to schools, parks, shopping centers, churches, or transportation facilities. Bicycle and pedestrian ways should consist of easements or outlots, dedicated rights-of-way, at least 20 feet in width, with a pavement width of at least five feet, depending on the type and volume of users, as indicated in Figure 4.

Table 25

HIGHWAY DESIGN SPEED AND MINIMUM REQUIRED SIGHT DISTANCE FOR DIRECT-ACCESS DRIVEWAY PLACEMENT

Highway Design Speed (mile per hour)	Minimum Sight Distance (feet)	Desirable Sight Distance (feet)
30	200	200
35	225	250
40	275	325
45	325	400
50	400	475

Source: American Association of State Highway and Transportation Officials and the Wisconsin Department of Transportation.

Width: Blocks should be wide enough to provide for two tiers of lots of appropriate depth, except where separation of developments from through traffic or protection and preservation of natural resources is required.

Lots

General: The size, shape, and orientation of lots should be appropriate for the location of the subdivision, for the preservation of natural resources, and for the type of development and use contemplated. The lots should be designed to provide an aesthetically pleasing building site and a proper architectural setting for the building contemplated.

Side Lot Lines: Unless justified by the configuration and preservation of natural resource features, side lot lines should be at right angles to straight street lines or radial to curved street lines on which the lots face. Lot lines should follow municipal boundaries rather than cross them.

Double-Frontage Lots: Double-frontage, or "through," lots should be prohibited, except in the case of reverse frontage lots where necessary to provide separation of development from arterial traffic, as shown in Figure 9, or to overcome specific disadvantages of topography and orientation.

Access: Every lot should front, or abut, a public street.

Lot Size: Lots should furnish sufficient area to accommodate buildings, parking, landscaping, screening, and all required yards adequately. Area and dimensions of all lots should conform to the requirements of the applicable zoning ordinance. Generally, however, minimum lots sizes in industrial areas and in certain designated commercial areas along arterial streets and highways should be one acre, with a minimum frontage of 150 feet.

Lot Depth and Proportion: It is recommended that the depth of new lots generally be at least 120 feet. Normal lot depths should be increased to accommodate the width of any buffer strips provided along abutting arterial streets, highways, and railroads. In certain cases, the depth should be increased to accommodate shared land-access roads or traffic aisles between adjoining compatible uses and the lots aligned parallel with arterial streets to help reduce the number of access points along arterials. Excessive depth of lots in relation to width should be avoided whenever possible, unless justified for the preservation of natural resources; a proportion of two and one-half to one is suggested as a maximum depth-to-width ratio. Flag lots should be avoided whenever possible.

Lot Width: Lots within the interior of a block should have a width at the building setback line that conforms to the applicable zoning ordinance. In general, required minimum lot widths should be increased if a utility easement, bicycle way, pedestrian way, or a landscaped buffer strip is located on the lot.

Corner Lots: Corner lots should have an additional width of at least 15 feet to permit adequate building setbacks from side streets.

Commercial Spatial Considerations

Commercial Business Clustering: Businesses with similar characteristics should form commercial clusters, not strips, within proximity of one another in order to better define identifiable commercial areas for the user; provide functional linkages of similar business types; and provide circulation linkages for vehicular, bicycle, and pedestrian traffic. Businesses may be located so as to form the following three general types of clusters:

1. Shopping center retail sales and services, characterized by onsite parking for customer automobiles and a pedestrian-oriented shopping environment. Uses in this category would include general merchandise stores, food stores, apparel and accessory stores, drugstores, department stores, gift shops, cleaners, barbers and hairdressers, banks and savings and loan institutions, and restaurants (other than drive-in or drive-through).

2. Highway automobile-oriented retail sales and services, characterized by sales and services to commercial customers in the automobile. These are not pedestrian-oriented types of commercial uses. Uses in this category include gasoline stations, automobile sales and service, bowling alleys, car washes, drive-in theaters, drive-in banking, drive-in and drive-through restaurants, and motels.

3. Offices, including professional offices, medical offices, dental offices, and clinics.

Traffic Circulation Between Adjacent Properties: Provision for traffic circulation between adjacent commercial uses should be provided through coordinated-access drives, shared parking lots, and interconnecting bicycle and pedestrian ways, as shown in Figures 6, 10, and 11.

Onsite Vehicular Circulation: The vehicular circulation system within and around individual commercial parcels should be so developed as to provide easy access to parking facilities for the larger community without lessening the safety or capacity of arterials. Conflicts between vehicles and pedestrians should be avoided where possible and, where conflicts cannot be totally avoided, should be minimized. Also, delivery and service circulation patterns on the site should not conflict with customer circulation.

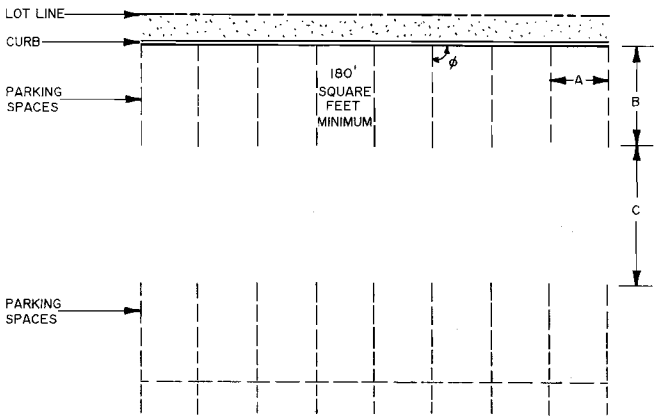
Onsite Queued Vehicle Storage: There should be sufficient onsite space to accommodate at least three queued vehicles waiting to park or exiting the parking lot without utilizing any portion of the arterial street right-of-way or in any other way interfering with arterial street traffic and safety. For drive-up services, a queuing area to accommodate a minimum of 10 vehicles onsite should be provided.

Onsite Parking Areas

Number of Parking Spaces: Parking spaces should be provided in sufficient number to meet the requirements of the applicable zoning ordinance. Reserved parking stalls should be provided for the physically handicapped, pursuant to the Americans with Disabilities Act and Section 346.503 of the Wisconsin Statutes. When warranted, adjustments to the minimum number of parking spaces required should be allowed to avoid constructing unneeded and excessive impervious surfaces in areas that could otherwise be preserved or converted to landscaped open space.

Figure 13

MINIMUM DESIGN DIMENSIONS FOR PARKING LOTS AT VARIOUS ANGLES



Design Dimensions in Feet	Key	Degrees (ø)				
		0	30	45	60	90
Stall Width	A	9	10	10	10	10
Stall Length	B	22	18	18	18	18
Aisle Width	C	12	12	12	16	24

Source: SEWRPC.

Parking Lot Location: Parking lots should be so sited as to minimize walking distances to the facility the parking lot is serving. The American with Disabilities Act recommends that handicapped parking spaces preferably be no more than 200 feet from the accessible entrance of a building and, if possible, allow those with disabilities to enter the building without crossing traffic lanes or passing behind other parked vehicles.

Parking Lot Dimensions: Minimum design dimensions for parking lots are shown in Figure 13. Dimensions for handicapped parking spaces should comply with those established in the Americans with Disabilities Act.

Parking Lot Drive Width: Parking lot drives should have a minimum width of 12 feet for one-way traffic and 24 feet for two-way traffic.

Surfacing: All traffic aisles and off-street parking areas should be graded and hard-surfaced with concrete or asphalt so as to be dust-free and properly drained. Parking areas for five or more vehicles should have the aisles and parking spaces clearly marked in order to distinguish between parking stalls and vehicular circulation areas.

Parking Visibility from Arterial Streets: Parking lots should be partially visible from an adjoining arterial street or highway, have clearly marked entrances and exits, and be visually distinguishable from public rights-of-way. Parking lots with spaces perpendicular to arterial street rights-of-way and with direct access to the right-of-way without a service drive should be prohibited.

Curbs and Barriers Near Structures and Lot Lines: Curbs or barriers should be installed a minimum of five feet, preferably 10 feet, from structures and property lines to prevent parked vehicles from damaging structures or from extending over lot lines. In addition, adequate space should be provided for landscaping and visual screening as necessary.

Parking Lot Lighting: Parking lot lighting should serve four purposes. First, the lighting should provide for the safe movement of pedestrian and vehicular traffic. Second, it should aid in the provision of an environment which promotes security and crime prevention. Third, the lighting should aid in creating an aesthetically pleasing environment at nighttime, as well as during the daylight hours. Fourth, the lighting for commercial parking lots should assist in promoting the use of commercial facilities both day and night.

Recommended illumination for commercial parking areas should be about 1.0 footcandles.[8] All other outside lighting should be arranged and shielded to prevent glare or reflection, nuisance, inconvenience, or hazardous interference of any kind on, to, or with adjoining streets or residential properties. All wiring should be placed underground.

Onsite Service and Loading Areas

Service and loading areas should be located for easy service vehicle access. Service and loading areas should not conflict with pedestrian or general vehicular traffic in the area. Also, service and loading areas which are generally not aesthetically pleasing should be so oriented or designed as to avoid visual contact with the view of the public and the customers in the area.

Landscaping

General: Landscaping enhances the overall attractiveness of a community and contributes to the general welfare of the public by providing shade, shelter, and screening. Plants selected for use in the urban environment, such as in parking lots and along streets, should be salt-tolerant. Decorative mulch, such as of stone or shredded hardwood bark with underlying fiber-like weed barrier, should be used in lieu of grass where heavy pedestrian and vehicular traffic is present or where the availability of water is limited. If grass is proposed in landscaped areas, it should be properly maintained and protected from pedestrian and vehicular traffic, otherwise an "all-weather" surface material should be used, such as decorative pavement surface or stone mulch with underlying weed barrier. Excessive pavement of open space areas with hard-surface materials such as asphalt or concrete should be discouraged. Flower beds should only be provided if provisions are made for proper maintenance. Berms are beneficial for plants, especially if more suitable planting soil is placed in planting areas over poor soil and drainage. The use of native plants, such as prairie grass and wild flowers that are nonexotic, should be used in areas of steep topography, along rural roadways, and in designated "natural" areas of parks and parkways both to preserve or achieve a "natural" appearance and also to reduce public maintenance costs. Any proposed landscaping should recognize traffic safety requirements, including those for sight distances, vision triangles, and vehicular recovery areas.

Existing Vegetation: Every effort should be made to protect and retain existing trees, shrubbery, vines, and grasses not actually lying in public roadways, drainageways, paths, and trails. Promiscuous removal of existing vegetation should be avoided and, when permitted, cutting and clearing should be conducted so as to prevent erosion and sedimentation and to preserve and improve scenic qualities. In addition, trails constructed in environmentally sensitive areas should be designed so they result in the least removal and disruption of vegetation, with minimal impairment to the natural beauty of the area. Trees should be protected and preserved during construction as illustrated in Figure 14 and in accordance with sound tree conservation practices, including the use of wells, islands, or retaining walls whenever abutting grades are altered. Special

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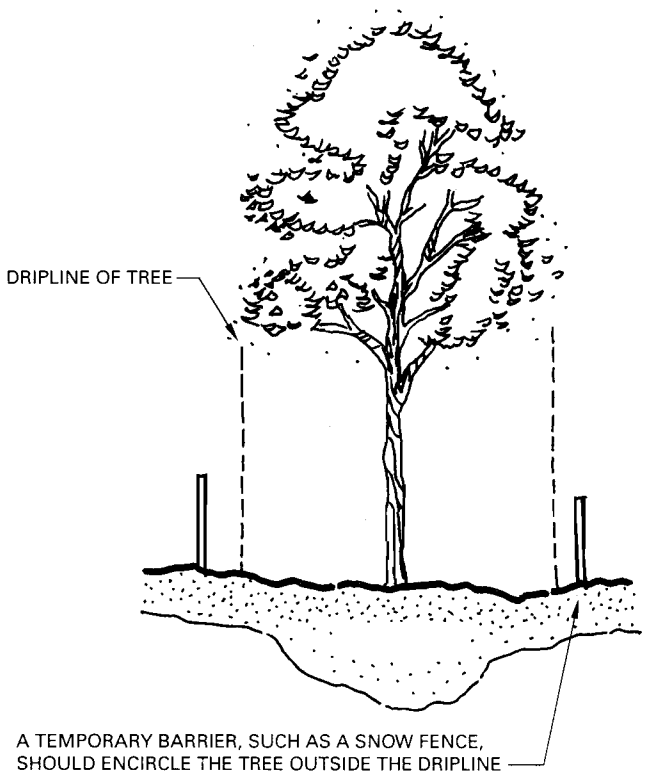
[8]*Recommended standards from the U. S. Department of Transportation, Federal Highway Administration's Roadway Lighting Handbook, Washington, D. C.: U. S. Government Printing Office, December 1978, p. 118. The recommended illumination value shown is meaningful only when used in conjunction with other elements. The most critical elements are luminaire mounting height, spacing, transverse location of luminaires, luminaire selection, traffic conflict areas, border areas, transition lighting, and alley and roadway lighting layouts.*

Figure 14

PROTECTION OF EXISTING TREES



Source: SEWRPC.

consideration should be given to preventing soil compaction and stockpiling of soil or construction materials over existing tree roots, even if such placement is temporary.

Wind and Landscape Planting: Landscaping should be provided to minimize winter wind and to promote summer wind effects on structures. Winter wind protection is afforded by providing landscaping of an adequate height on the west side of buildings. An optimum distance between a windbreak and a building is approximately twice the height of the windbreak. A windbreak consisting of two rows of coniferous trees is optimal for efficiency; additional rows would not significantly increase its effectiveness as a windbreak. Figure 15 illustrates this concept.

Noise and Landscape Planting: Groups of trees, shrubs, and other landscape masses, such as earth berms, can serve as noise barriers and should be utilized where noise could create problems for neighboring land uses. Such landscaped noise barriers are most effective when the barrier is near the noise source or the noise receiver. Landscape plantings and earth berms should be used as sound barriers whenever possible.

Solar Access and Landscape Planting: With respect to solar access, landscaping planted to the south of structures should be broad, deciduous species with open twig patterns that would provide shade from the summer sun and permit sunlight through the branches in the winter. Figure 16 illustrates these concepts.

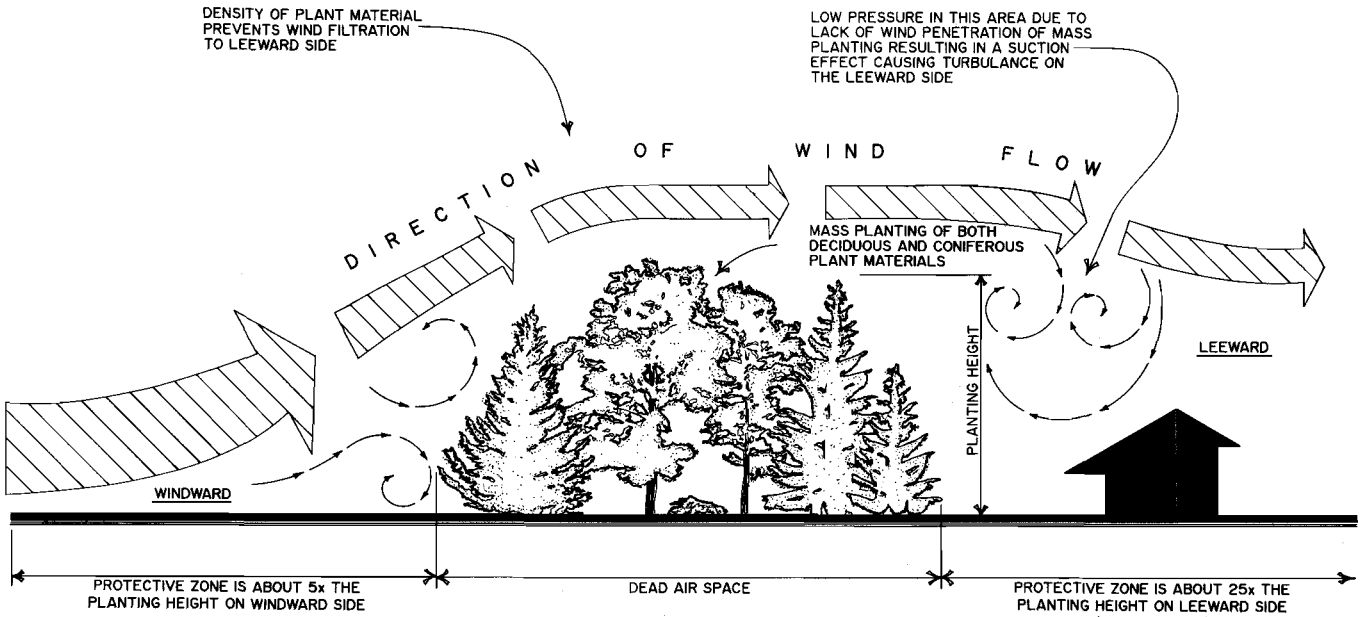
Selection of Landscape Plants: Trees and shrubs, meeting the standards of the most recent edition of the American Association of Nurseryman's American Standard for Nursery Stock, should be planted at appropriate intervals along public rights-of-way, adjacent to buildings, and in other designated onsite planting areas. The type of planting should be determined by the topographic features and microclimate of the site. The spacing of plants should be determined by soil conditions, land use, terrace width, utility locations, and design theme. Appendix A sets forth the species characteristics of various trees, shrubs, ground covers, and vines to aid in the selection of landscape plantings based, in part, upon species hardiness to environmental conditions. For regulatory purposes, Appendix A also recommends desirable sizes and spacing of certain plant species to be used for buffering or screening.

Street Trees: Street trees should be provided along public rights-of-way to reduce air temperature by providing shade and air pollutants by converting carbon monoxide to carbon dioxide. A minimum of one deciduous shade tree at least two inches in diameter measured at chest height, approximately five feet above ground level, and meeting the American Association of Nurserymen's standards for nursery stock, should be planted for each 50 feet of frontage. Trees could be planted closer together than suggested in Appendix A, depending on the type of tree selected, the desired design affect to be achieved, and the amount and quality of growing space provided for the root system. Figure 17 shows the minimum distances a street tree should be located from certain physical features within a street right-of-way.

Street Terraces: Sidewalks located immediately adjacent to motor vehicle travel lanes discourage pedestrian travel because of noise and the percep-

Figure 15

LANDSCAPING FOR PROTECTION FROM WIND



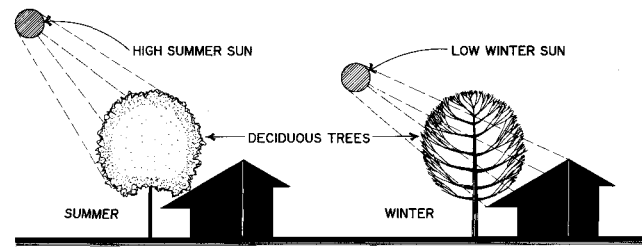
A MASS PLANTING OF LANDSCAPE MATERIALS, INCLUDING BOTH DECIDUOUS AND CONIFEROUS VARIETIES, CAN DECREASE THE WIND VELOCITY ABOUT FIVE TIMES THE PLANTING HEIGHT ON ITS WINDWARD SIDE AND ABOUT TWENTY-FIVE TIMES ITS HEIGHT ON THE LEEWARD (WIND SHADOW) SIDE OF THE MASS PLANTING.

Source: SEWRPC.

tion of hazard. A landscaped or surfaced area, referred to here as a "terrace," should be provided between the curb or edge of pavement and the inside edge of sidewalks to provide separation between vehicular and pedestrian traffic. Terraces provide a more pleasant pedestrian environment by permitting an area off the sidewalk for sign posts, street lights, utility poles, trash cans, and other street furniture; provide an area for street trees and other landscaping; allow driveway aprons to be located outside the sidewalk area; provide additional area for snow storage; and reduce splashing of pedestrians by passing vehicles operating on wet pavements. Terraces that are to contain trees should be at least six feet wide, preferably 10 feet or wider, to allow sufficient space for the root system and to minimize damage to adjacent pavements, especially sidewalks. If the terrace is 15 feet or wider, trees could be staggered instead of arranged in a straight row. Generally, large street trees should not be planted in terraces less than four feet wide unless a tree grate is provided or a landscape device is used to control the lateral growth of the root system in certain locations, especially near sidewalks. Precaution should be taken when placing trees near utility lines.

Figure 16

DECIDUOUS LANDSCAPE PLANTING AND SEASONAL SOLAR ACCESS



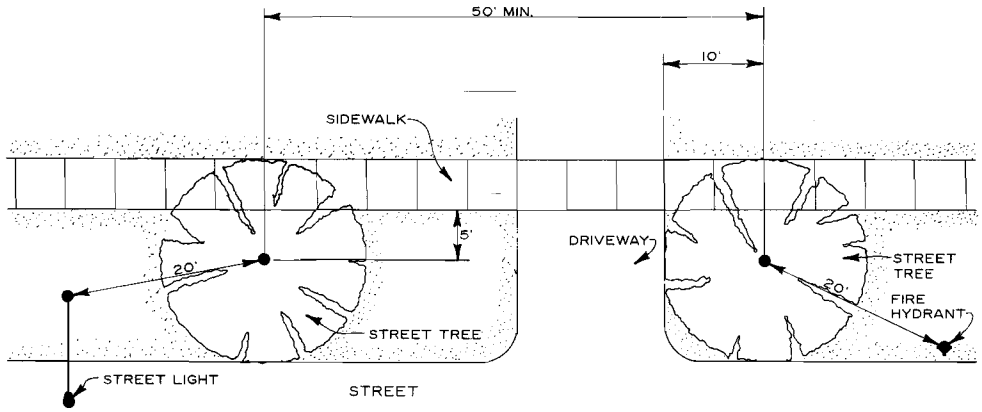
GENERALLY, LANDSCAPE PLANTINGS TO THE SOUTH OF STRUCTURES SHOULD BE BROAD, DECIDUOUS SPECIES WITH OPEN TWIG PATTERNS, AFFORDING THE PASSAGE OF LIGHT THROUGH THE BRANCH STRUCTURE IN THE WINTER. THE CHOICE OF DECIDUOUS PLANTINGS SHOULD BE MADE SINCE THEY DROP THEIR LEAVES IN THE FALL AND ALLOW LOW WINTER SUN TO PENETRATE THEIR BRANCHING STRUCTURE. IN THE SUMMER, THE DECIDUOUS PLANTINGS CAN ALSO PROVIDE SUN SHADING OF THE STRUCTURE,THUS LOWERING UNWANTED SUMMER HEAT GAIN.

Source: SEWRPC.

Main "Entryway" Landscaping: Main "entryways" into parks, residential neighborhoods, historic districts, central business districts, and business or industrial centers should be well defined with attractive landscaping and signs to provide a sense of identity as well as direction. Collector and minor

Figure 17

MINIMUM STREET TREE PLANTING DISTANCES IN PUBLIC RIGHTS-OF-WAY



Source: SEWRPC.

land-access streets functioning as main entrances into residential neighborhoods and business or industrial parks should contain an attractive entryway that may consist of boulevard-type street entrances. Proper design and maintenance of landscaped entryways, especially those containing center landscaped islands, are crucial to retention of both aesthetic appeal and function without obstructing traffic visibility or turn movements. Figure 18 illustrates alternative landscape designs for such "entryways." Other alternative landscaping layouts are provided in Figure 21, except that ground signs, not pole or pylon signs, are recommended. The Village determined that the upkeep of most landscaped entryways, except those representing the Village as a whole, should be primarily the responsibility of property owners or private organizations such as a subdivision or neighborhood organization.

Buffer and Perimeter Landscape Strips: Perimeter landscape strips, which may also function as a landscaped buffer strip, should be located around parcels to provide open space for attractive landscaping, screening from incompatible land uses, and filtration of stormwater runoff. These strips also help define the boundaries of properties and entrances and provide a separation between parking lots and public rights-of-way. Such strips, however, are not necessary for adjoining sites that share entrances, traffic aisles, or parking lots at a common lot line.

Landscaped buffer strips should be provided between incompatible uses to screen or block visual nuisances, air and noise pollutants, or other negative impacts. Buffers could consist of various landscape features, such as earth berms with landscape plantings, fencing and walls with plantings, wide open spaces; and grade separations, in order to buffer dissimilar uses. Landscaped buffer strips provided along public streets should be designed to ensure the desired visual character of the community. Figure 19 illustrates alternative landscaping that could be provided in such buffer strips, including those along the rear of reverse-frontage lots. Openings for pedestrian and bicyclists should be provided and the standards for vision triangles mentioned earlier should be recognized. Also, buffer strips should not be located on any portion of existing or dedicated rights-of-way.

Building Foundation Landscaping: Landscaping adjacent to building foundations contributes to the overall aesthetics of the site and the architectural attractiveness of the building, as graphically illustrated in Figure 20. Landscaped areas comprised of a combination of decorative mulch, flowers, ground cover, shrubs, and ornamental trees should be provided adjacent to building elevations, excluding entrances, visible from streets and parking areas. Building foundation planting beds need not be continuous nor directly against the building. Planting areas could be consolidated into large groupings of beds instead of a continuous planting strip and located at, or near, the dripline of roof overhangs, as illustrated in Figure 20. These planting areas could also reduce air-conditioning costs by absorbing potential refraction of warm solar radiation from adjacent pavement into buildings.

Sign Landscaping: A landscaped bed should be placed at the base of freestanding advertising signs to improve the aesthetics and noticeability of the signs. A planting area, consisting of a combination of decorative mulch, flowers, ground cover, and ornamental shrubs, should be provided around the sign without obstructing the sign face, as illustrated in Figure 21.

General Parking Lot Landscaping: The interior of off-street parking areas serving 20 vehicles or more should be provided with evenly dispersed landscaped areas totaling not less than five percent of the total surfaced parking area. Each landscaped area should cover at least 150 square feet and be not less than six feet wide, preferably 10 feet wide if trees are provided. Trees at the rate of one deciduous tree at least two inches in caliper at chest height, approximately five feet above ground, for every 15 parking spaces should be provided in the landscaped areas within the parking lot. Location of landscaped areas; selection of plant materials; protection afforded the plantings, including curbing; and provision for maintenance should be considered. Landscaping similar to that shown in Figure 22 should be provided in parking lots.

Parking Lot Landscaped Islands: At the end of each parking bay, or row of spaces, a landscaped island with dimensions similar to a parking space should be provided to separate the bays from each other or from traffic lanes. Parking bays should not be constructed more than 200 feet in length without providing a contiguous landscaped island. The dimensions of a landscaped island may vary from the parking space dimensions to provide desirable geometric design features, such as rounded corners and angles, to facilitate maneuvering of automobile traffic. However, the total area of any island should not be decreased to less than 150 square feet as a result of such design changes.

It is important to note that the provision of islands is recommended, not only for aesthetic purposes, but also for functional and safety purposes. Islands separate parked vehicles from driveways; provide an indication of the parking orientation and layout, especially if parking stripes are absent; provide additional snow storage areas; and provide a visual clearance area, except for the minor obstruction of a tree trunk or light pole in the island, for vehicles driving out of the general parking areas onto adjacent driveways. Islands that function as vision clearance areas should maintain a clear zone between two and one-half and 10 feet above the mean pavement grade adjacent to these islands. Grass should be avoided in islands unless properly maintained.

Parking and Service Area Screening: Parking areas for 10 or more vehicles and loading and unloading service areas, if adjoining a residential use, should be screened from such residential uses by a solid wall, fence, berm, dense evergreen planting, or other effective means, constructed and maintained at a height of at least six feet. All parking lots visible from, and within 100 feet of, a street right-of-way should also be partially screened to reduce the negative impacts of such a use. The height of this screen should be at least three feet above the parking surface and could consist of a combination of plantings on top of berms or in planters, provided the combined height is at least three feet after three years. Figure 8 illustrates alternative landscape screening for parking lots visible to the public. The parking lot screen can be reduced in height or not required because of differences in grade. Also, openings for pedestrian or bicycle access should be provided and the standards for vision clearance triangles should be recognized.

If a berm is used as a screen, it should have a minimum height of one and one-half feet and a crown at least four feet wide, with side slopes no greater than one foot of vertical distance to four feet of horizontal distance. The berms should curve or undulate throughout their lengths. Fences and walls, excluding planters, should be constructed no less than three feet high and should be built of material compatible with the principal building on the site. Where applicable, gaps should be provided between the screen to allow for pedestrian and bicycle access.

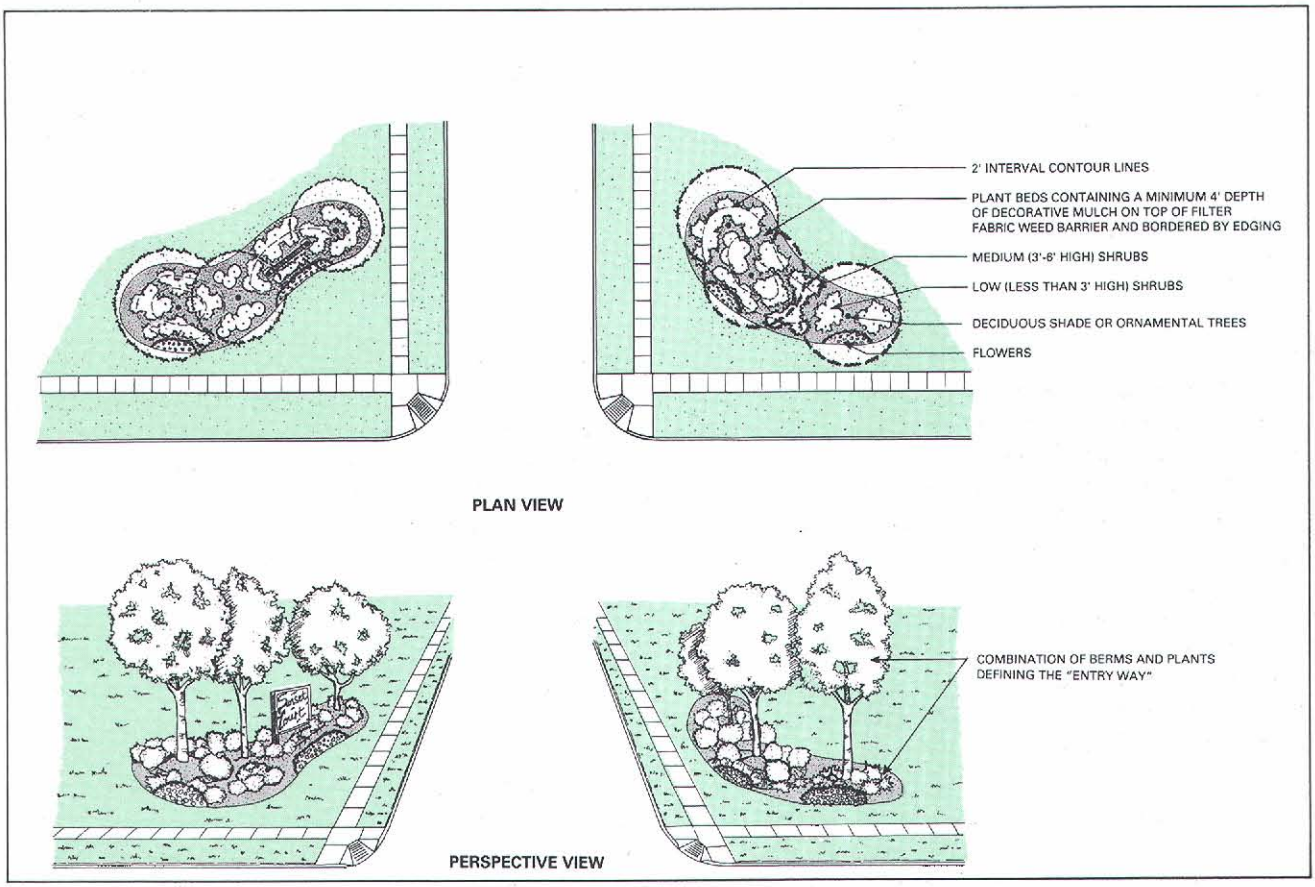
When only plantings are used for screening, the width of the perimeter landscape area should be at least of 10 feet. If berms are provided as barriers, the width of the landscape area should be adequate to accommodate the size of the berm, based on its slope, crown, height, and form. When structural barriers are used, the minimum width should be five feet. Plantings should be provided between the structure and the adjacent property line in order to reduce the visual impact and monotony of a continuous structure.

Dumpster and Mechanical Equipment Screening: Dumpsters and mechanical equipment should be unobtrusive or shielded from view. Dumpsters should be screened from public view and from

Figure 18

ALTERNATIVE LANDSCAPING FOR MAIN "ENTRYWAYS"

A. LANDSCAPING WITH BERMS AND PLANTS



B. LANDSCAPING WITH RETAINING WALLS AND PLANTS

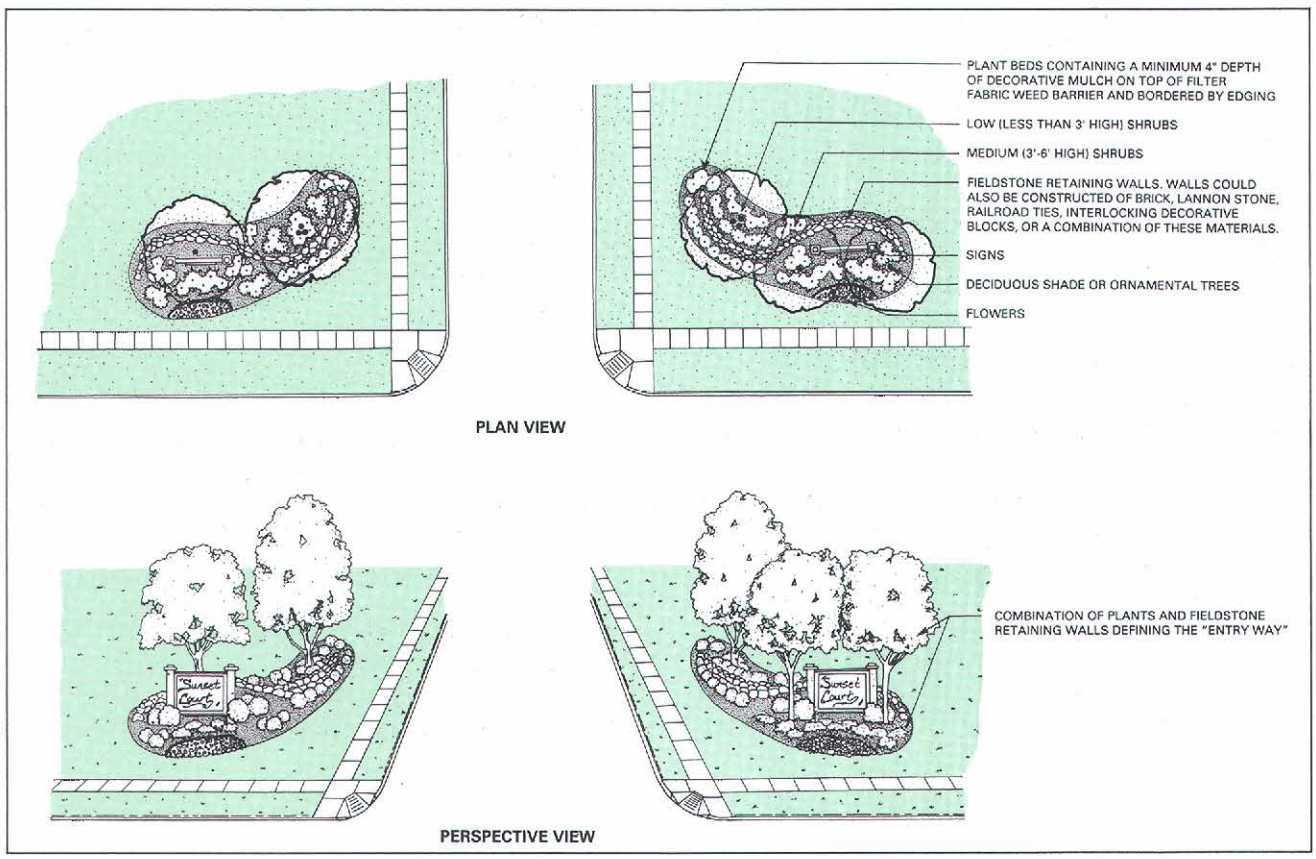
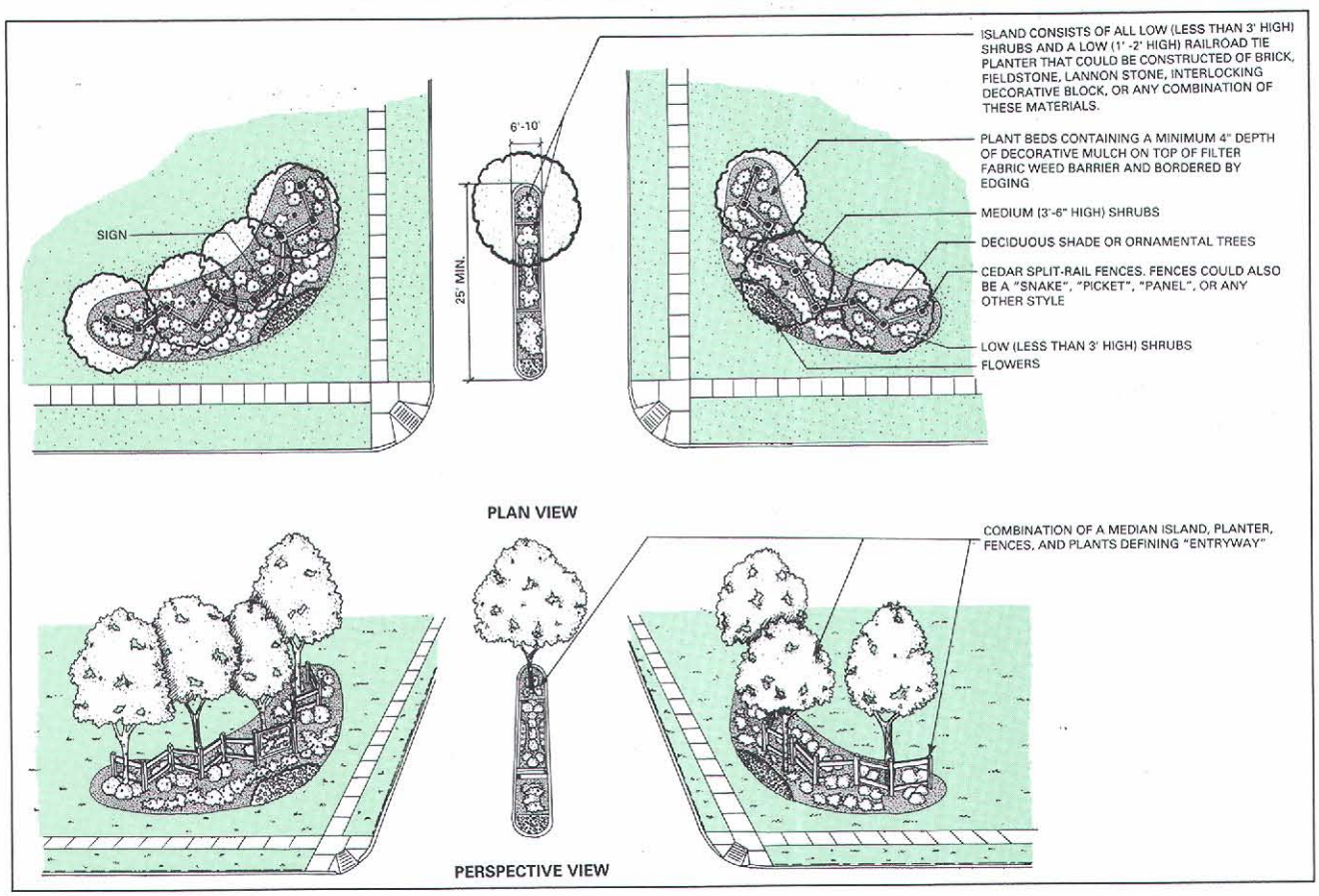
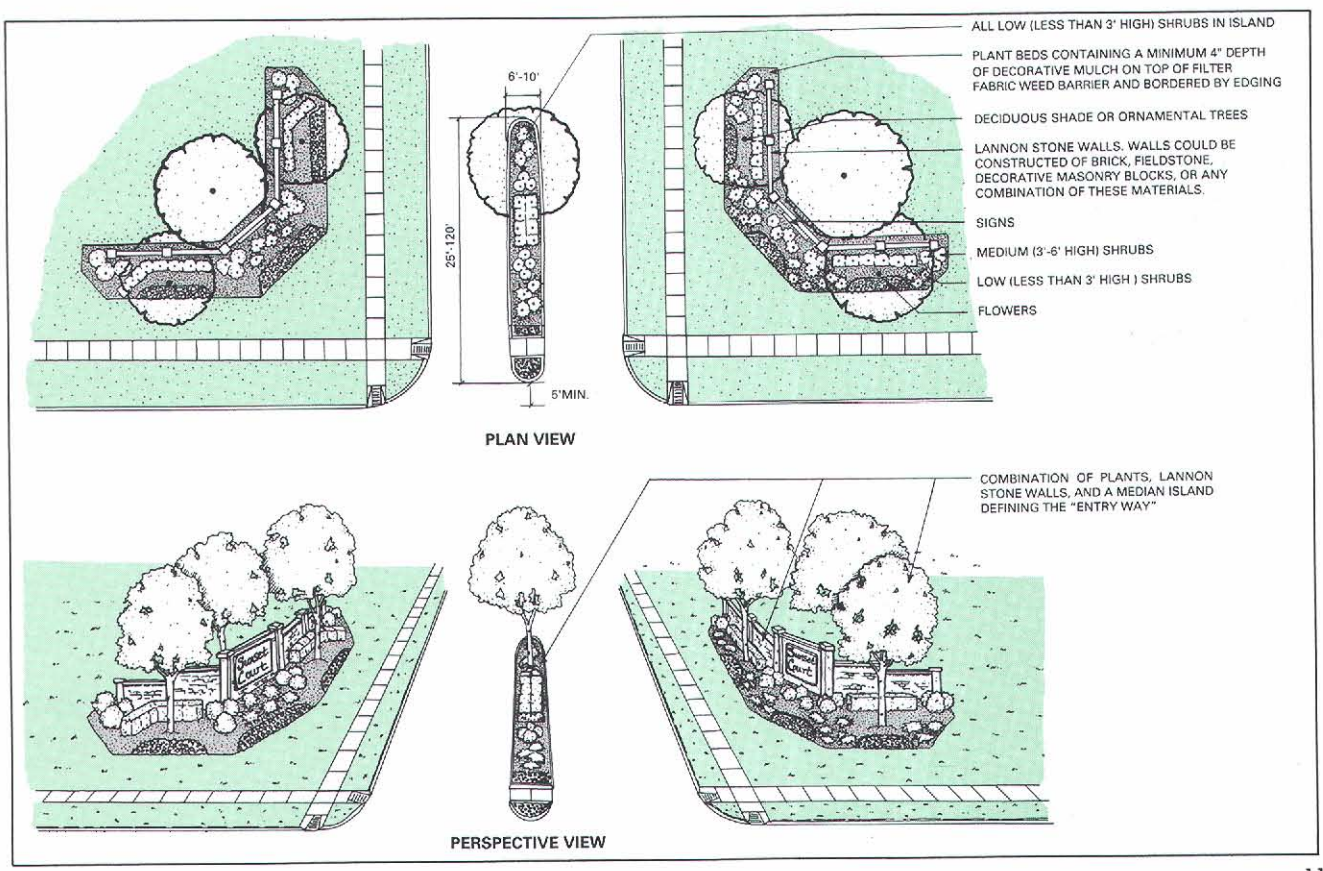


Figure 18 (continued)

C. LANDSCAPING WITH AN ISLAND, FENCES, AND PLANTS



D. LANDSCAPING WITH AN ISLAND, FREESTANDING WALLS, AND PLANTS

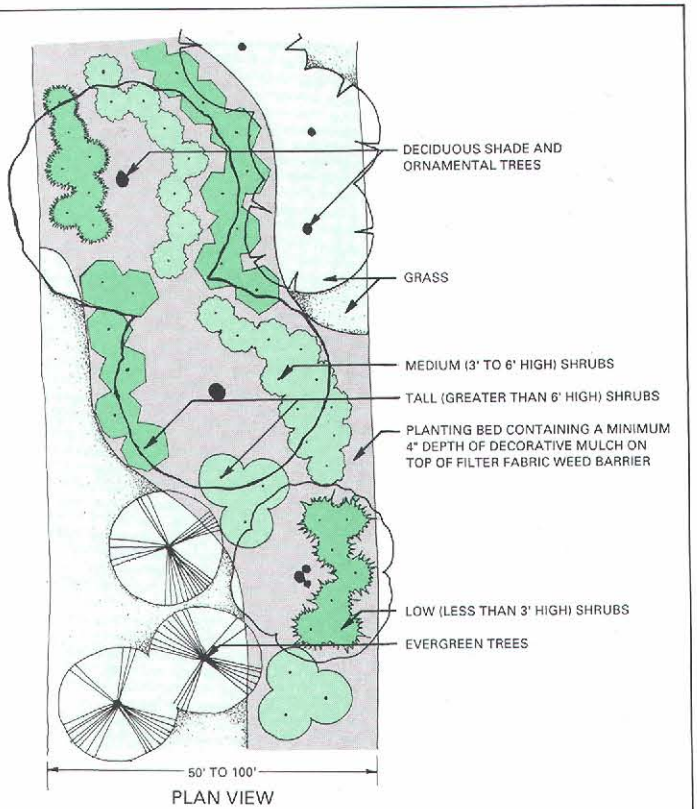


Source: SEWRPC.

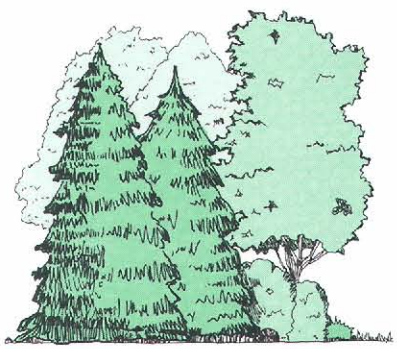
Figure 19

ALTERNATIVE LANDSCAPING FOR BUFFERS BETWEEN INCOMPATIBLE USES

A. BUFFER WITH WIDE YARD AND PLANTS

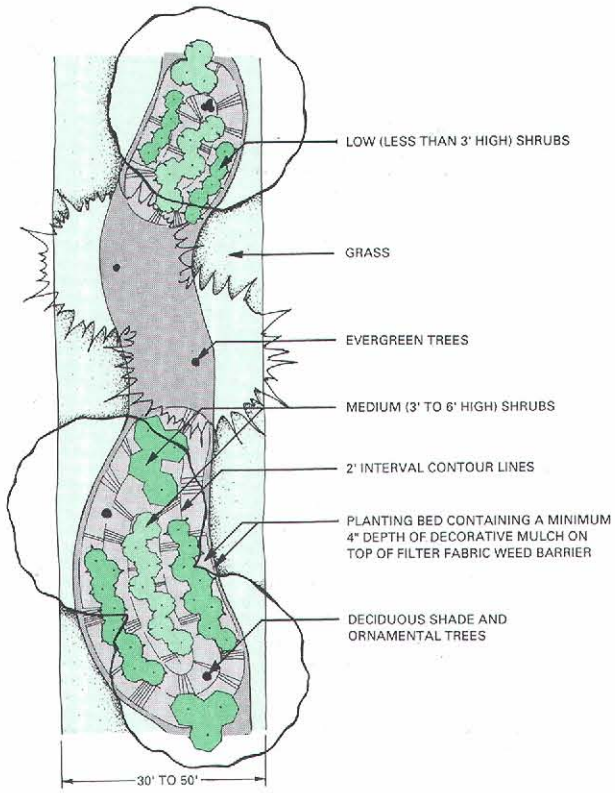


PLAN VIEW

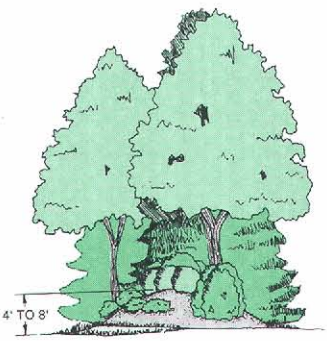


PROFILE VIEW

B. BUFFER WITH BERMS AND PLANTS



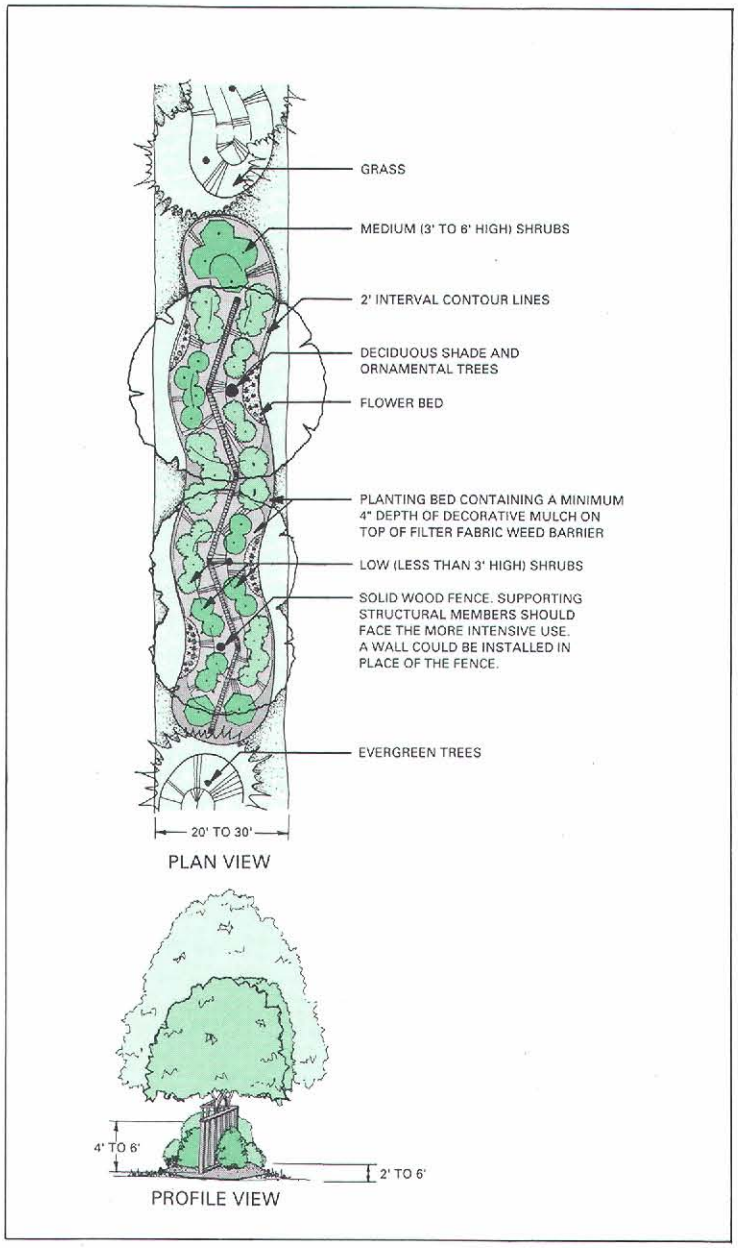
PLAN VIEW



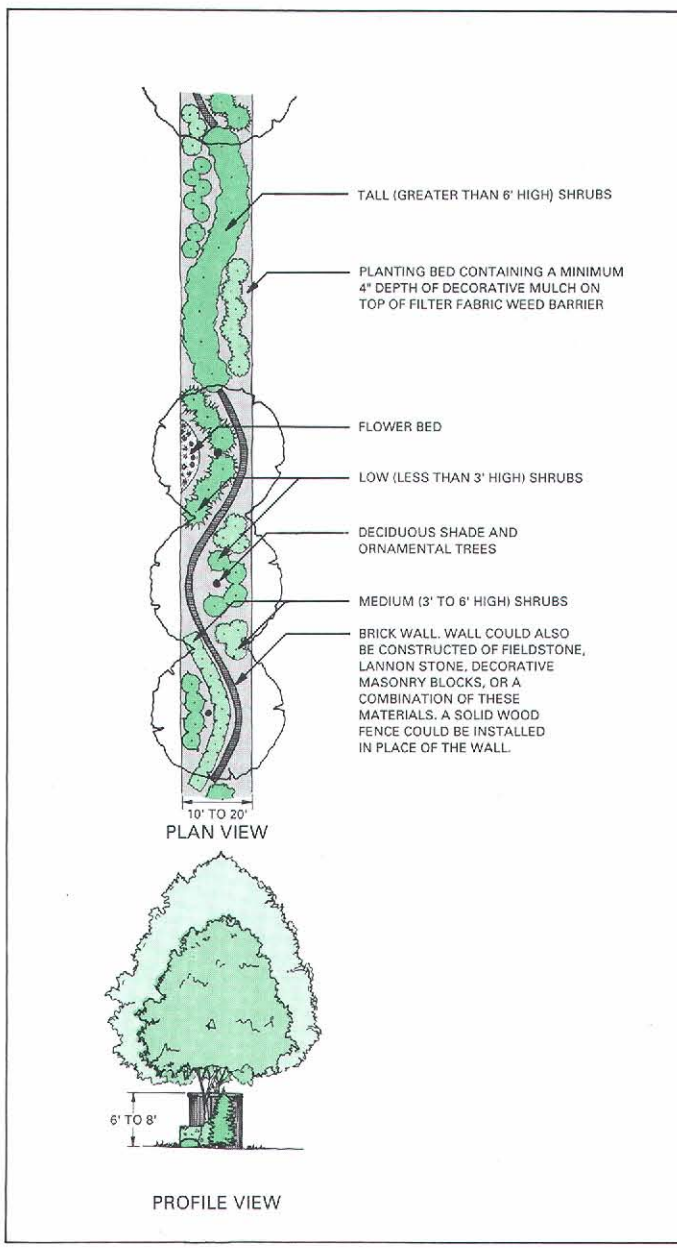
PROFILE VIEW

Figure 19 (continued)

C. BUFFER WITH BERMS, FENCING, AND PLANTS



D. BUFFER WITH WALLS AND PLANTS

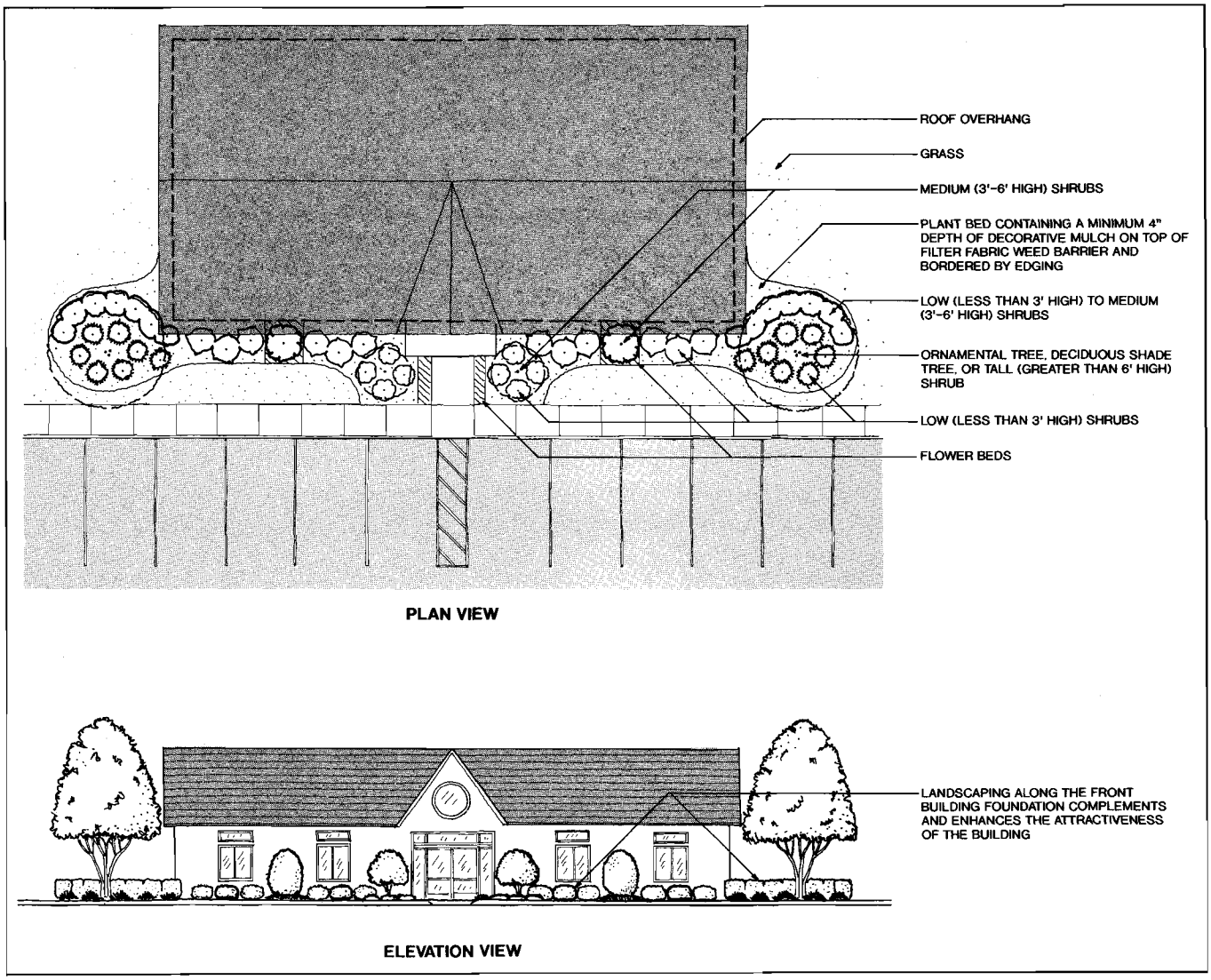


Source: SEWRPC.

Figure 20

ALTERNATIVE LANDSCAPING FOR FRONT ELEVATIONS OF BUILDINGS

A. LANDSCAPING ALONG BUILDING FOUNDATION WITH CONTINUOUS PLANT BEDS

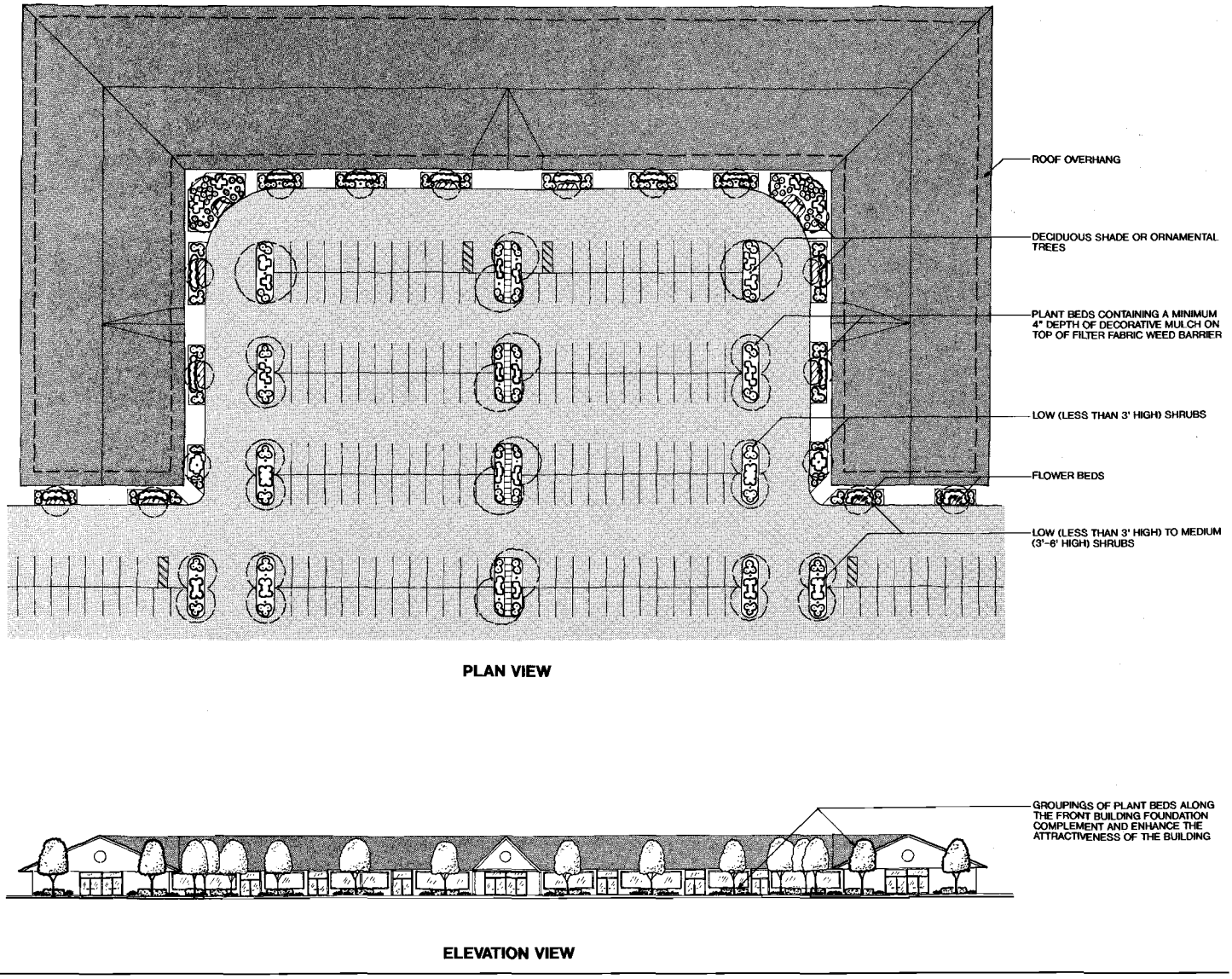


adjacent properties on at least three sides, preferably four, by a solid fence or wall. If screened only on three sides, the open side should not face a public street. If screening is provided on four sides, the front side should consist of a partial screening of 50 percent or less opaqueness for security reasons. The height of the fence or wall should be at least one foot above the top of the dumpster to help prevent the wind from spreading debris over the structure. Plantings should also be provided adjacent to the structure, as shown in Figure 23. Rooftop and at-grade mechanical equipment should also be effectively screened from public view. Methods used should be compatible with the site's landscaping and architecture.

Site Furniture and Amenities: Site furniture and amenities include a myriad of man-made objects which have the functions of serving pedestrian needs and adding visual variety in a commercial area. Site furniture and amenity items include lighting luminaires and posts, planters, benches, fences and gates, handrails, drinking fountains, water fountains, sculptures, clocks, play equipment, bicycle racks, garbage receptacles, fire hydrants, telephones, bollards, kiosks, newspaper boxes, sunshading devices, parking meters, mailboxes, police and fire callboxes, and signage. The design and placement of such items should contribute to the overall design theme of a commercial area, serving an aesthetic as well as a utilitarian func-

Figure 20 (continued)

B. LANDSCAPING WITH GROUPINGS OF PLANT BEDS NEAR BUILDING FOUNDATION AND ROOF OVERHANG



Source: SEWRPC.

tion, while adding a sense of design continuity and human scale.

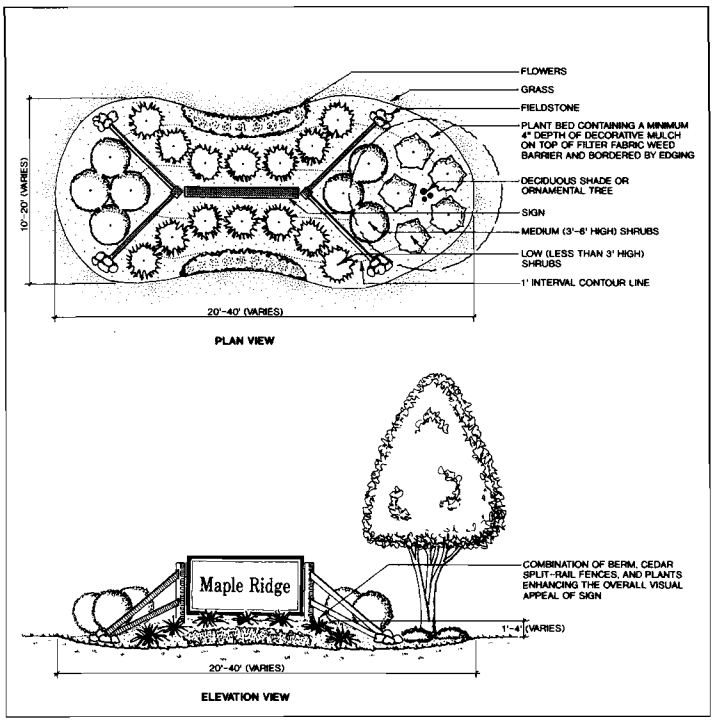
Signs

In addition to conforming to the rules and regulations of a community sign ordinance, signs should be designed so that they are in keeping with the overall character of the area and its buildings. Lettering on signs should be functional as well as visually pleasing. Truly functional lettering uses a typeface which is properly spaced and easy to read and makes its message clear from the distance at which it is intended to be read. Generally, the fewer the words on the sign face, the more likely people will be able to read the sign with ease. Community "Welcome" signs or permanent banner-type signs extending across streets should be provided at key locations along arterials streets functioning as main entryways into a community. The design should be representative of the character of the

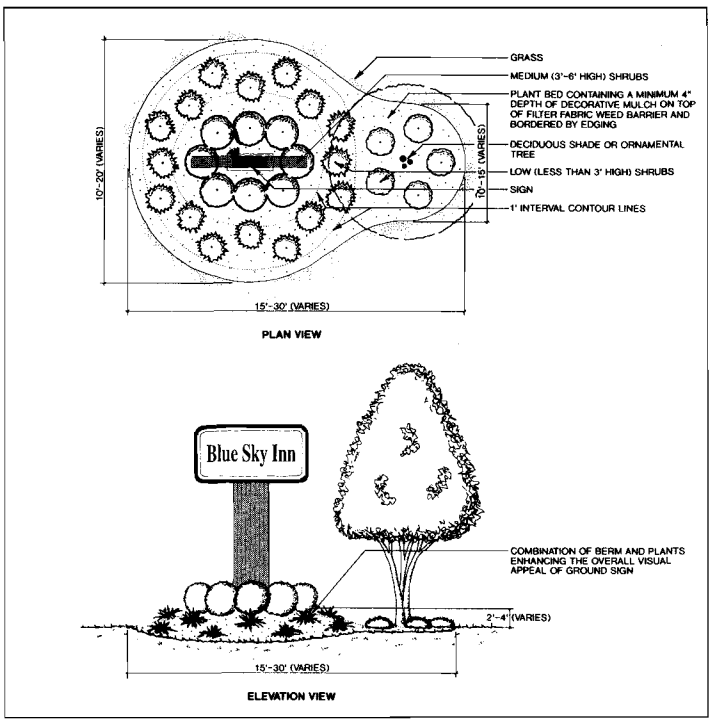
Figure 21

ALTERNATIVE LANDSCAPING FOR FREESTANDING ADVERTISING SIGNS

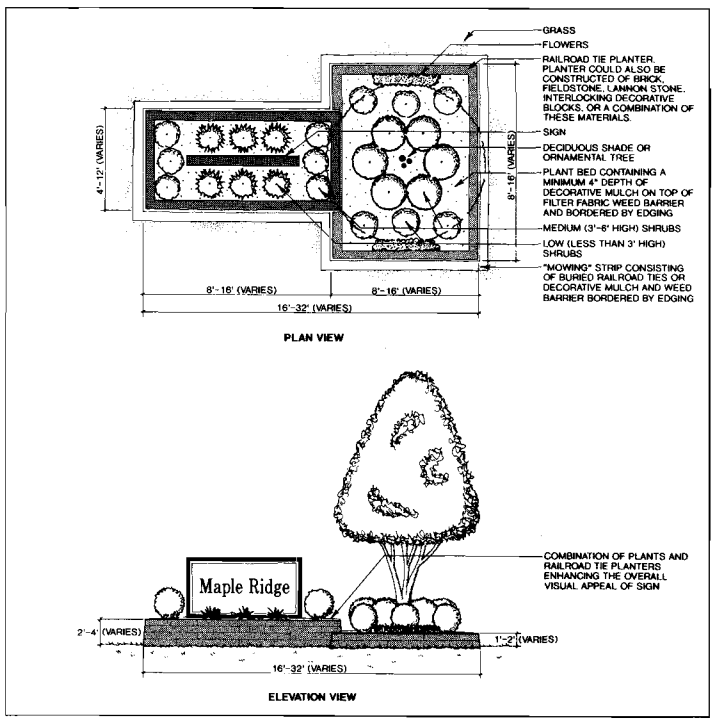
A. LANDSCAPING WITH BERM, DECORATIVE FENCES, AND PLANTS



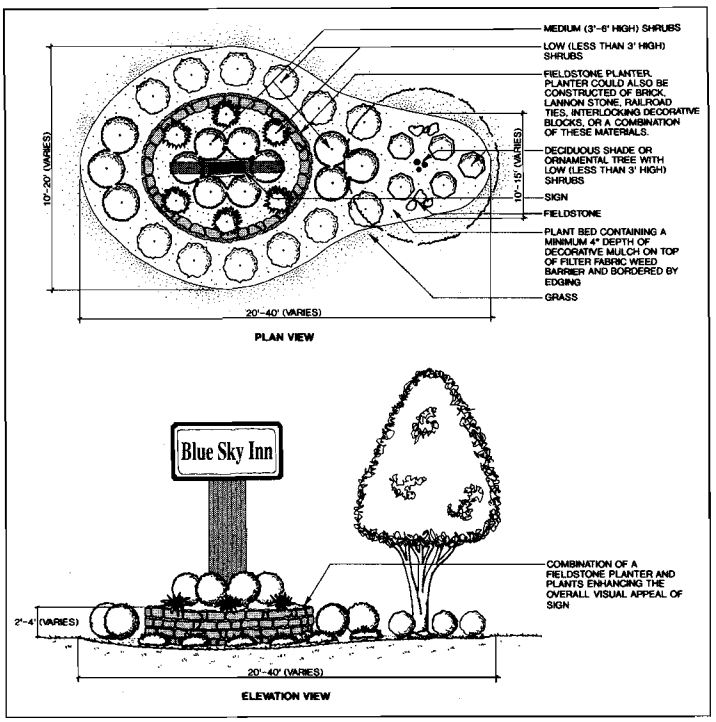
C. LANDSCAPING WITH BERM AND PLANTS



B. LANDSCAPING WITH PLANTS AND PLANTERS



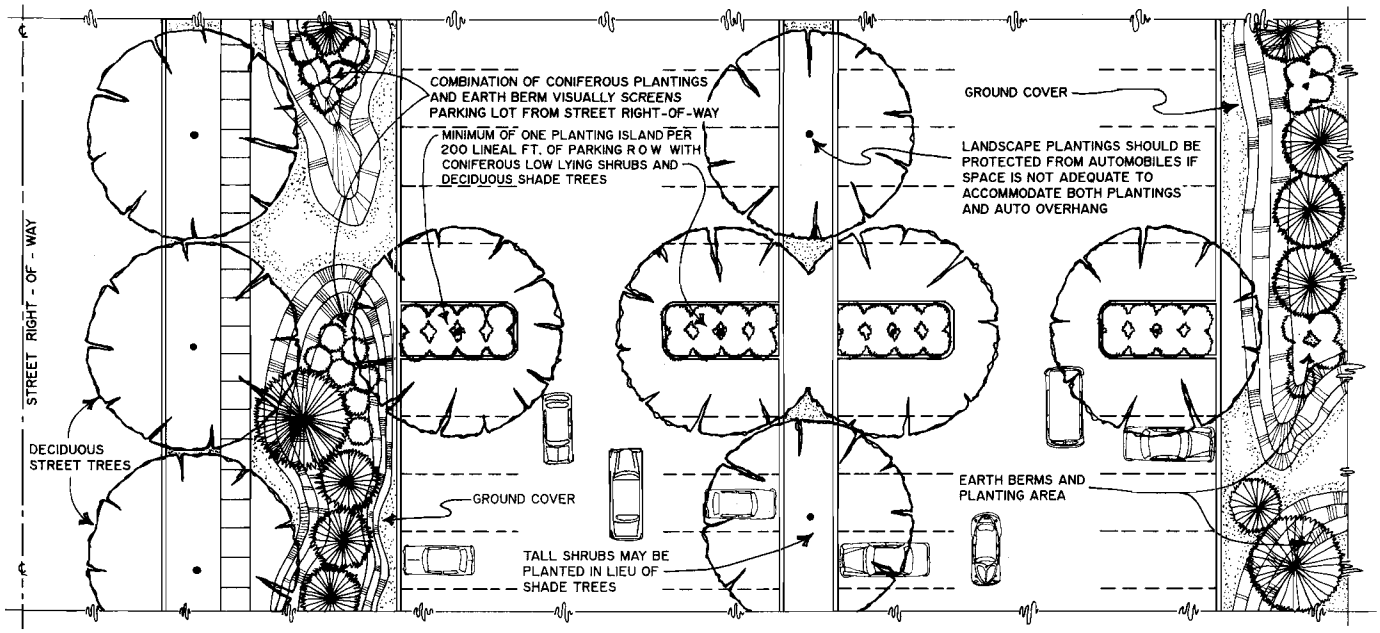
D. LANDSCAPING WITH FIELDSTONE PLANTER AND PLANTS



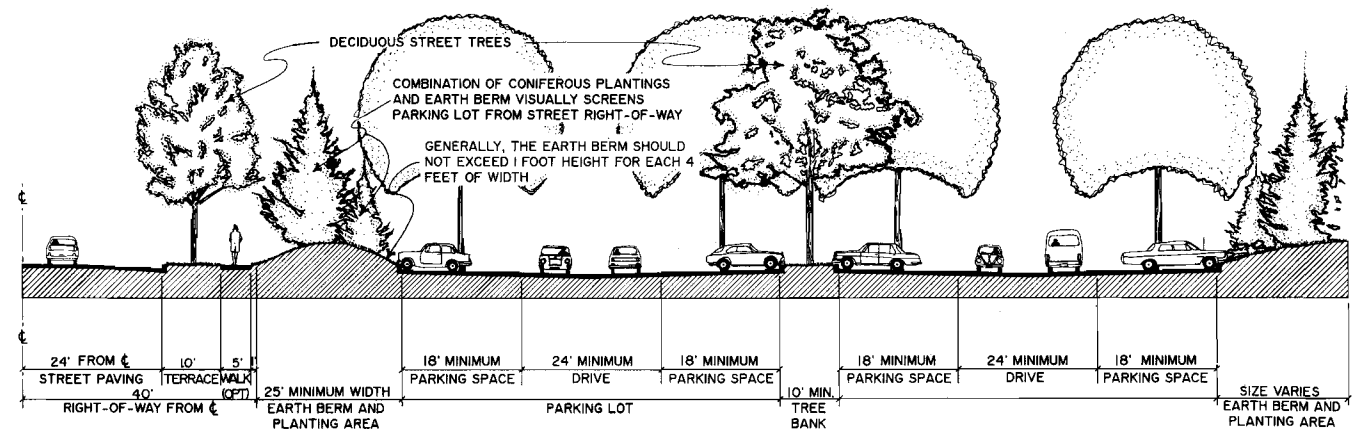
Source: SEWRPC.

Figure 22

RECOMMENDED LANDSCAPING FOR PARKING LOTS



PLAN VIEW



SECTION VIEW

Source: SEWRPC.

community, including the central business district, and should reflect the design theme desired by the community residents.

Utilities and Easements

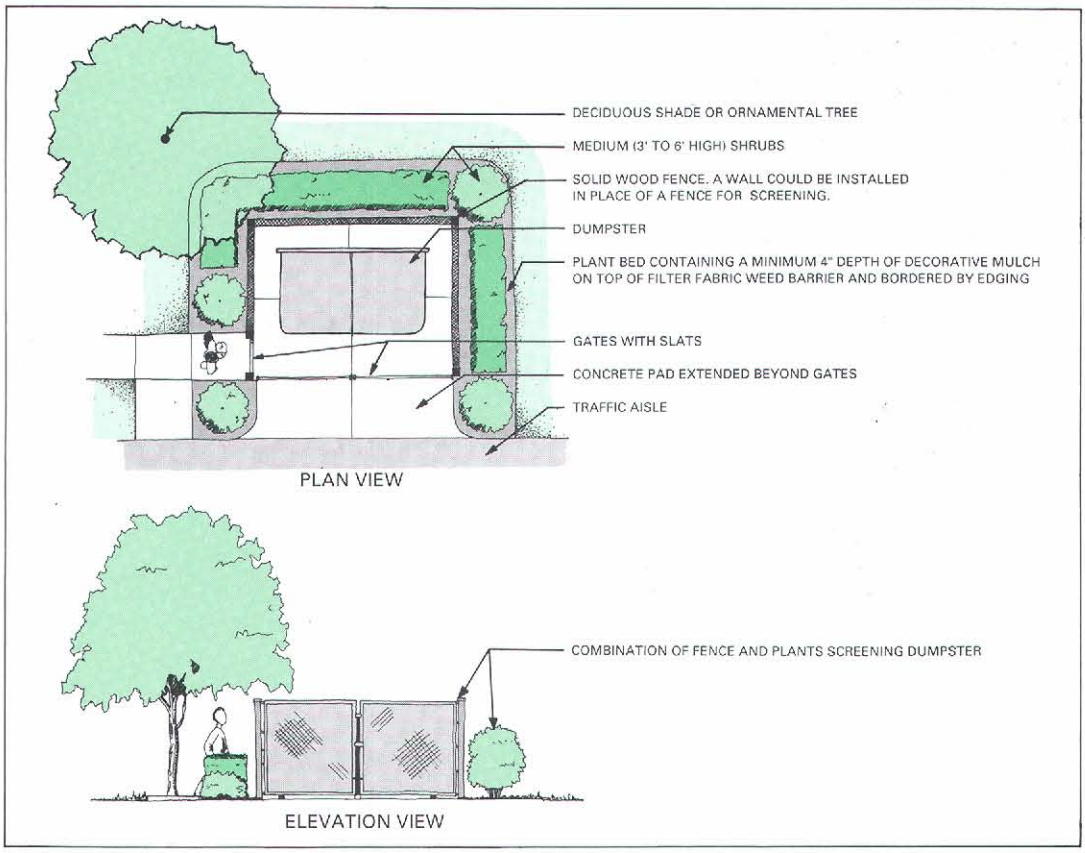
Above-Ground Utility Cables: The location or relocation of above-ground utilities underground should be considered, since they detract from the overall appearance of an area and typically add to visual clutter.

Utility and Drainage Easements: Utility easements of widths deemed adequate for the intended purpose, but no less than 20 feet wide, should be provided across lots or centered on side and rear lot lines, where necessary or advisable for electric power and communication wires and conduits; storm and sanitary sewers; and gas, water, and other utility lines. Where a land division is traversed by a watercourse, drainageway, or street, an easement should be provided for drainage purposes.

Figure 23

ALTERNATIVE SCREENING FOR DUMPSTERS

A. SCREENING WITH FENCE AND PLANTS



B. SCREENING WITH WALL AND PLANTS

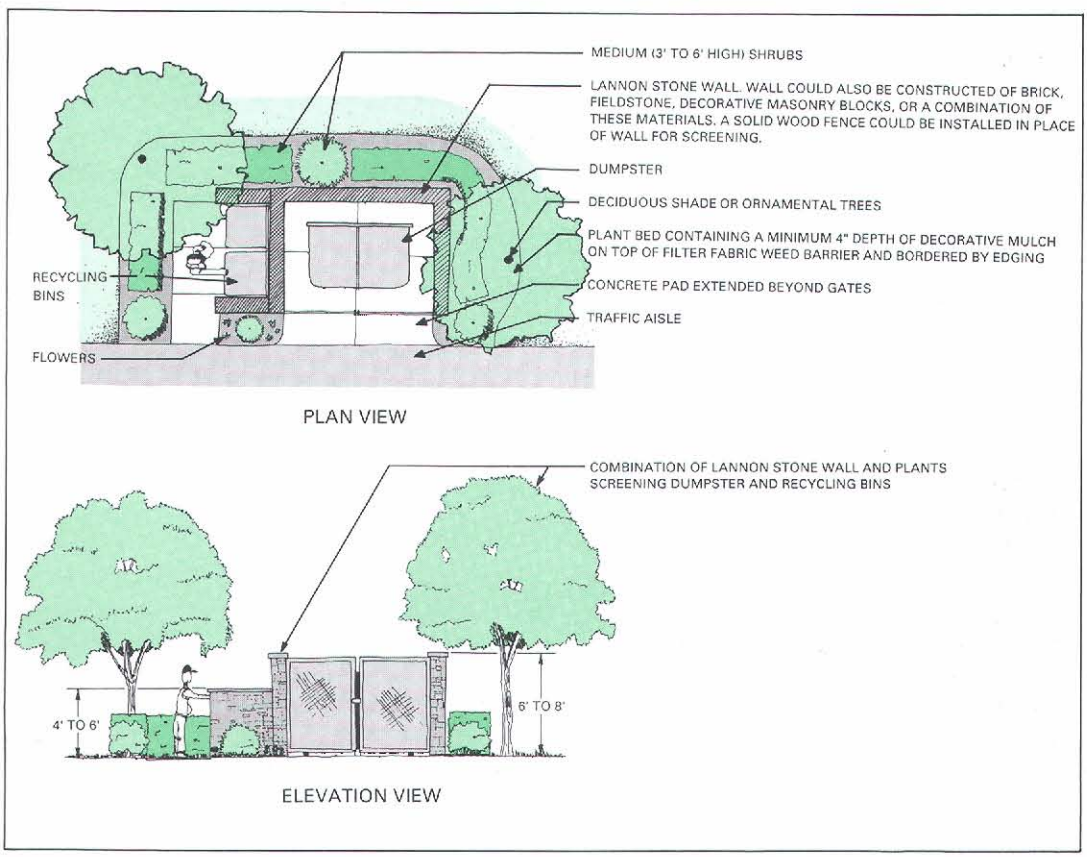
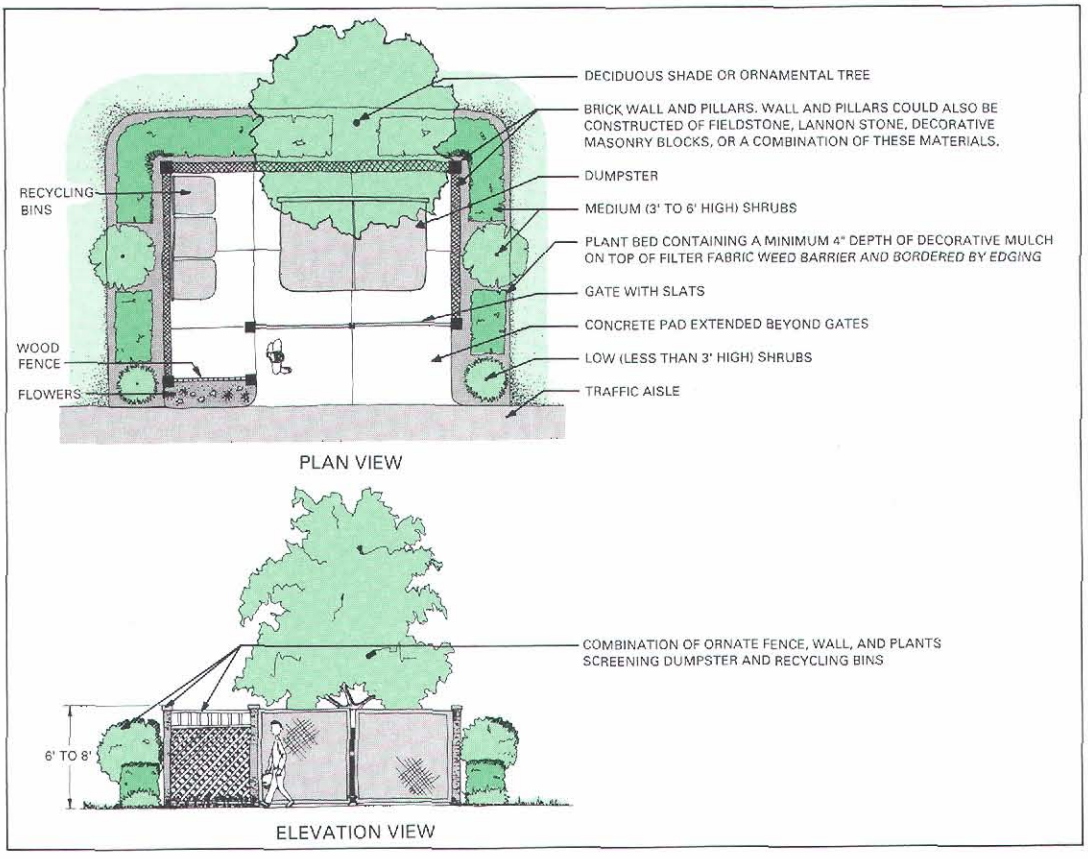


Figure 23 (continued)

C. SCREENING WITH FENCE, WALL, AND PLANTS



Source: SEWRPC.

Stormwater Drainage and Erosion and Sedimentation Control

Stormwater drainage facilities should be adequate to serve a proposed development. They may include curbs and gutters, catch basins and inlets, storm sewers, roadside swales, culverts, open channels, water retention structures, and settling basins. The facilities should be of adequate size and grade to accommodate hydraulically designed flows through and from a proposed development and should be so designed as to prevent and control soil erosion and sedimentation and to present no hazards to life or property.

Earthmoving activities, such as grading, topsoil removal, mineral extraction, road cutting, waterway construction or enlargement, excavation, channel clearing, ditching, drain tile laying, dredging, and lagooning, should be so conducted as to prevent erosion and sedimentation and cause minimal disturbance to natural fauna, flora, watercourses, water regimens, and topography. Construction activities should be planned so that the soil is disturbed a minimal amount of time. Cut and filled lands outside street rights-of-way could be graded to a slope not exceeding 25 percent or the angle of repose of the soil, whichever is less.

If necessary to control erosion and sedimentation, the Village may require a developer to plant grasses, trees, and vines, the species and size of which are to be determined by the Village. The Village may also require a developer to provide or install other protection and rehabilitation measures, such as shrubs, fencing, slopes, riprap, wells, revetments, berms, jetties, clearing, dredging, snagging, drop structures, brush mats, willow poles, and grade stabilization structures. All erosion control measures should meet the requirements for such measures in the Village of Kewaskum

Zoning Ordinance and the design standards identified by the Wisconsin Department of Natural Resources in a document titled Wisconsin Construction Site Best Management Practice Handbook.

General Maintenance

A complete and thorough public maintenance program for public lands, as well as individual private maintenance programs, especially in commercial areas, should be established to ensure attractiveness. Improvements to buildings and their continued positive appearance depend on proper maintenance attitudes and procedures. However, during the urban design process, certain future maintenance requirements should be considered, including the provision of easy access for window and facade cleaning, painting, and repairing. Building materials should be chosen with an eye toward their durability and their future maintenance. Maintenance programs should be established, including staking, watering, fertilizing, spraying, weeding, pruning, replacing, and generally maintaining landscape planting areas; cleaning up litter and emptying trash containers in a timely fashion; sweeping, cleaning, and repairing paved surfaces; and the care and maintenance of site furniture, replacement of broken or vandalized parts and burned-out light bulbs.

KEWASKUM CENTRAL BUSINESS DISTRICT URBAN DESIGN GUIDELINES

Building Streetscape Facades

The structural shapes and proportions of buildings, the placement of doors and windows, the placement of signs, and various other building details all contribute to the overall streetscape appearance. Although the facades of two adjacent buildings may be different, their overall appearance can be made compatible through the proper use of these visual elements. Individual building facade treatment plans should be developed based, in part, upon the design character of the surrounding area and the various urban design guidelines developed herein, thus assuring a degree of compatibility of architectural design with neighboring structures.

In the Kewaskum central business district, many of the storefronts, store entries, and general urban facades still retain their original architectural character to some degree. Every effort should be made to enhance or recapture the original character of those buildings of historic significance pursuant to the standards promulgated by the U. S. Department of the Interior for historic preservation projects and Objective No. 9 in this chapter. Canopies and awnings, in addition to providing shade from direct sunlight and providing protection to pedestrians from the weather, can both preserve and promote the overall horizontal visual continuity of the Kewaskum central business district and can assist in the development of a uniform and visually compatible signage system. Retaining the cornice or soffit line of a building or group of buildings also assists in assuring horizontal continuity and maintaining scale.

Yards

Front, rear, and side yards should be kept clean and proper garbage receptacles used. Other unsightly features should be covered from view in a creative fashion. Entrances for the general public should provide a walkway with safe and attractive features, including landscape plantings when practicable. Where a building site or yard is exposed to public view, consideration should be given to its urban features and to its impact on the surrounding area. Setbacks should be determined by the Village of Kewaskum Zoning Ordinance.

Urban Scale and Mass

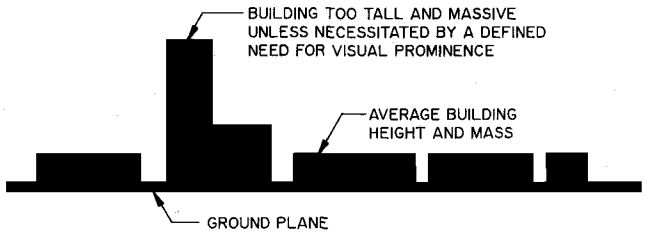
The relative proportion, or scale, of a building to its neighboring buildings, of a building to the pedestrian or observer, or of a building to the surrounding area should be considered when new buildings are built or when existing buildings are remodeled or altered. Visual elements that contribute to this overall scale and mass in the central business district include the visual rhythm and proportion of the elements of the building facades, the architectural detailing, the visual directional emphasis of the streetscape (which can either be horizontal or vertical), the symmetrical or asymmetrical character of the facades, the mass of individual buildings, the use of landscape materials, the size and configuration of open spaces, the use of building materials, the use of color, building height and width, and the use of street furniture. These elements of urban scale and mass should be considered whenever possible to create an attractive environment. Figure 24 illustrates the relationship of urban scale to a commercial streetscape.

Streetscape Rooflines and Roof Shapes

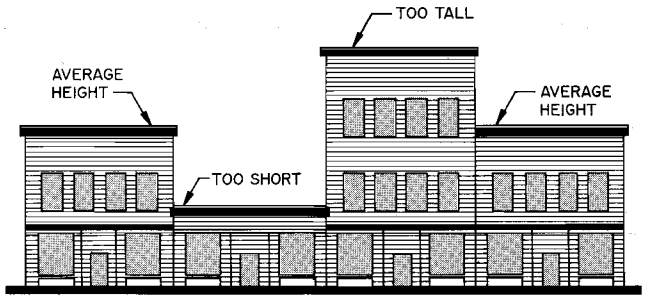
The upper edges of building roofs or rooflines visually define the height of the building or streetscape. The visual continuity of these urban design elements should be maintained, if warranted, and

Figure 24

URBAN SCALE AND MASS FOR COMMERCIAL BUILDINGS



COMMERCIAL STREETSCAPE SILHOUETTE AS VIEWED FROM PASSING AUTOMOBILE

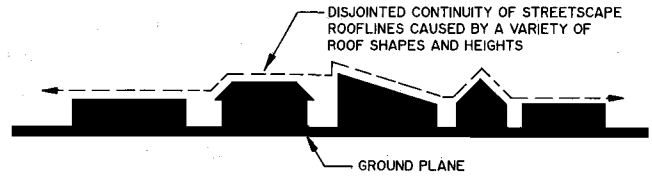


CENTRAL BUSINESS DISTRICT STREETSCAPE ELEVATION AS VIEWED BY THE PEDESTRIAN

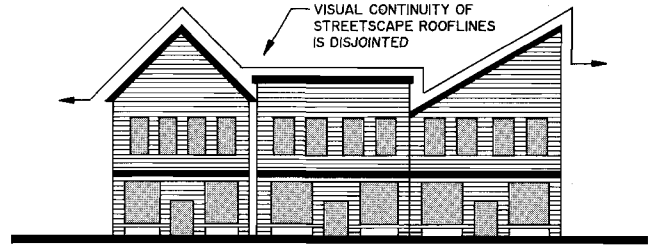
Source: SEWRPC.

Figure 25

COMMERCIAL STREETSCAPE ROOFLINES AND ROOF SHAPES



COMMERCIAL STREETSCAPE SILHOUETTE AS VIEWED FROM PASSING AUTOMOBILE



CENTRAL BUSINESS DISTRICT STREETSCAPE ELEVATION AS VIEWED BY THE PEDESTRIAN

Source: SEWRPC.

building development or redevelopment with opposing rooflines should be discouraged. Figure 25 illustrates the relationship of rooflines and roof shapes to an commercial streetscape.

Since the majority of the roofs in the Kewaskum central business district are flat, they are not easily viewed from the roads. However, the rooflines and parapet walls of many of these structures have pronounced and similar details which create both interest and visual unity among some of the structures. The visual continuity of the upper edges of these buildings, which visually defines the upper edge of the overall streetscape, should be maintained, if warranted.

Architectural Details

Architectural details and building ornamentation (if present) often represent historic elements of architecture and are important components of the overall character of a commercial area. The distinctiveness of older commercial buildings is directly associated with their architectural details. Making unsympathetic design changes to a building can destroy both the architectural character of the building and the overall commercial streetscape as well. Significant architectural details, where they exist, should not be lost in rehabilitation or "modernization" of existing buildings. Remodeling efforts should attempt to retain any rich architectural details. However, efforts to transform an existing building into an earlier period through the use of details that were not originally used on the structure do not usually retain the original architectural integrity of the building. Consequently, if these is an introduction of modern detail or a mixture of old and new parts on the building, the overall visual character of the building can easily be spoiled.

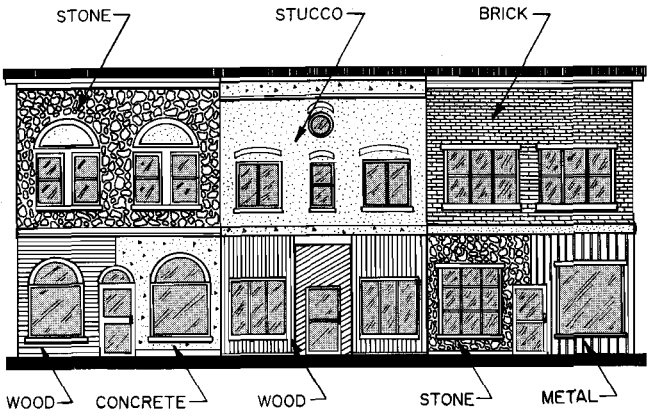
Selection of Materials and Colors

Selection of materials and colors for both architectural and landscape design should be based on unity of material and color, the atmosphere and character desired, the material and color composition of surrounding buildings and landscape features, the compatibility of the material and color

with other materials and colors, and climatic considerations. Use of conflicting material and relationships such as those shown in Figure 26 should be avoided.

Figure 26

USE OF MATERIALS ON BUILDING FACADES



NOTE: THE USE OF MANY CONFLICTING MATERIALS RESULTS IN VISUAL CHAOS.

Source: SEWRPC.

Landscaping

Landscaping provides functional and aesthetic characteristics that would improve the overall character of a central business district. Landscape plantings can provide shade and shelter, act as noise buffers and visual screens, assist in channeling pedestrian and vehicular traffic, reduce air pollutants, act as windbreaks, and decrease insolation (incoming solar radiation) before it reaches the ground, thus preventing reradiation (long-wave radiation) from asphalt and concrete surfaces, as shown in Figure 27. The design guidelines outlined earlier for landscaping should be used.

Accessory Buildings and Structures

Accessory buildings and structures should be compatible with principal structures in terms of building facade character, scale and mass, rooflines and roof shapes, materials, colors, and architectural details, particularly if these accessory structures are visible from public areas.

Above-Ground Utility Wires, Mechanical Equipment, and Dumpsters

In the central business district, the relocation of above-ground utilities either underground or, where possible, to alleys or the rear of properties should be considered since these wires detract from the overall appearance of the Kewaskum central business district and typically add to visual clutter. Dumpsters and mechanical equipment should be unobtrusive or screened from view, as illustrated earlier in this chapter. Rooftop and at-grade mechanical equipment should also be effectively shielded from public view.

Street Lighting

Primary lighting luminaires within the central business district should be mounted on decorative posts, as shown in Figure 28, generally at a height of 10 to 15 feet. This height allows the lighting to relate to both human and building scale. Lighting fixtures should be placed so that the light overlaps at a height of about seven feet. Posts and luminaires designed with colorful banners or hanging planters should reflect the overall character of the Kewaskum central business district. Recommended overall illumination for this district should be about 2.0 footcandles.

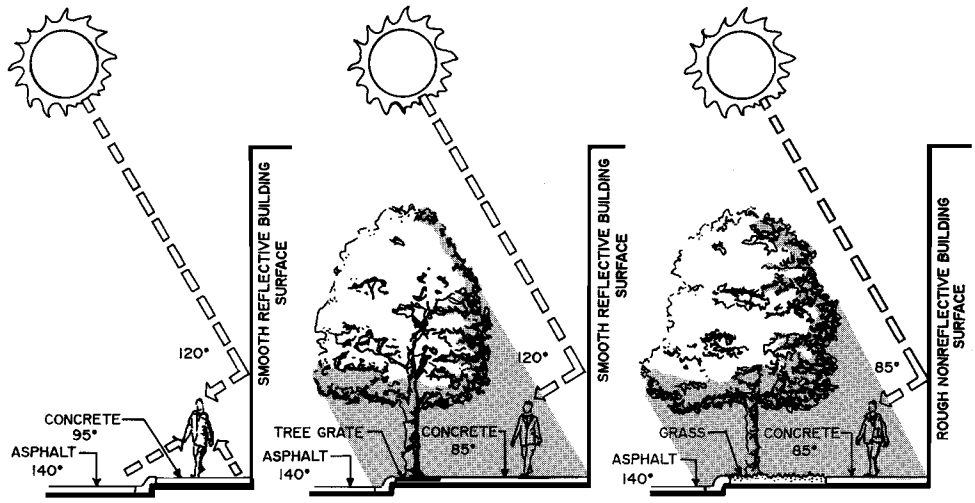
Signs

The sign design guidelines outlined earlier under the basic urban and site planning design guidelines should be used. In addition, signs should be placed in visually pleasing and logical places on building facades, including areas that are void of openings, projections, and architectural details. The heights of signs should be consistent between stores in the same village block. Figure 28 shows graphically alternative sign types and locations for a building in a central business district. Since the buildings in the Kewaskum central business district have predominantly flat storefronts and are oriented parallel to streets, flush-mounted face signs are recommended. Standard "franchise" and "brand name" signs should be avoided.

The design guidelines set forth in this chapter present the visual and urban design guidelines intended for the Kewaskum area. These guidelines have an important function in defining aesthetic and urban design characteristics necessary for creating a safe and attractive community while retaining and enhancing its unique character.

Figure 27

EFFECT OF LANDSCAPE PLANTINGS ON AIR TEMPERATURE AND PEDESTRIAN COMFORT

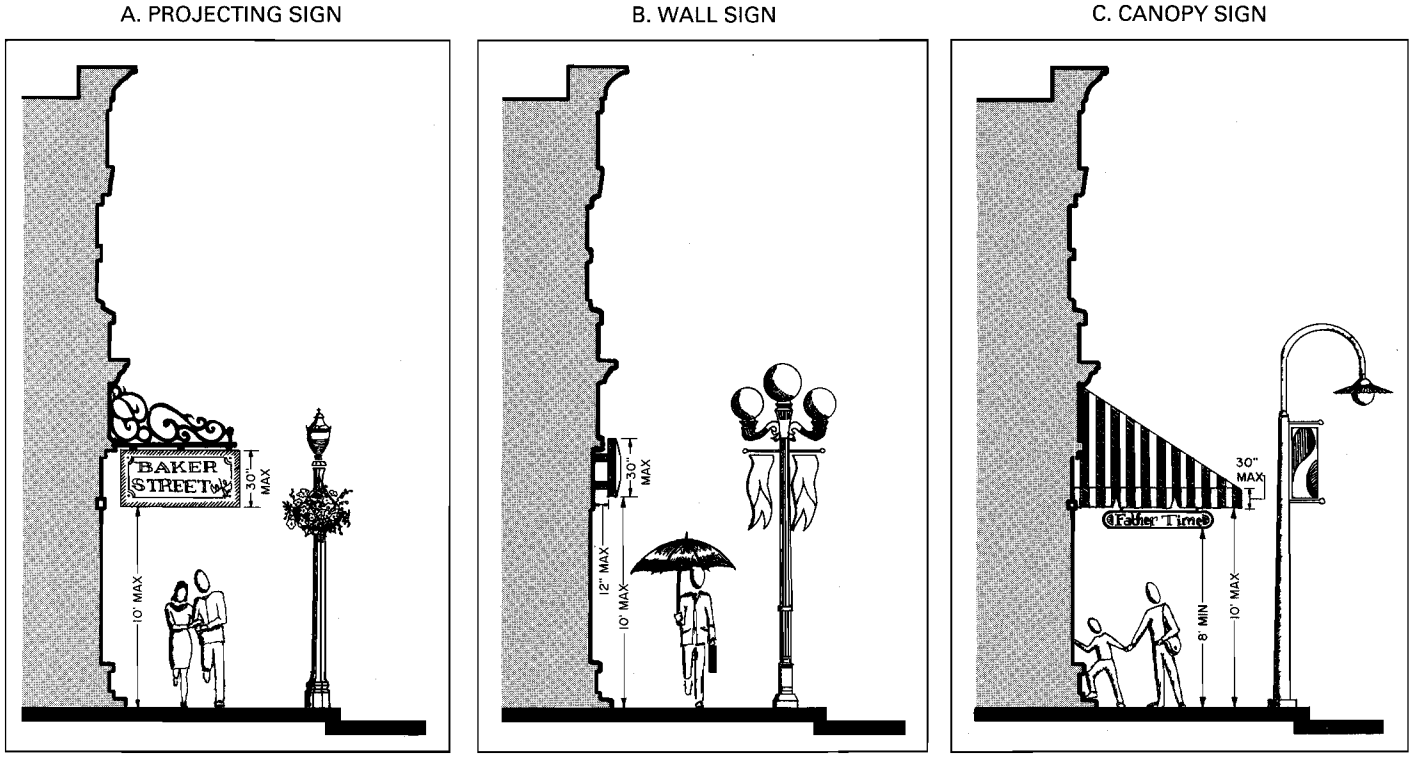


NOTE: AN OVERALL BASE AIR TEMPERATURE OF 90° WAS USED IN EACH CASE. ADAPTED FROM "PLANNING FOR ENERGY CONSERVATION", CITY OF DAVIS, CALIFORNIA.

Source: SEWRPC.

Figure 28

ALTERNATIVE STREETLIGHTS AND BUILDING SIGNS FOR THE CENTRAL BUSINESS DISTRICT



NOTE: SIGNAGE HEIGHT SHOULD BE CONSISTENT BETWEEN STORES ON THE SAME BLOCK.

Source: SEWRPC.

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Chapter VII

YEAR 2010 LAND USE AND COMMUNITY FACILITY REQUIREMENTS

The objectives, principles, standards, and related urban design guidelines set forth in Chapter VI of this report express the physical development goals of the Village and environs and the standards to be used as a basis for formulating development plans to meet those goals. The standards perform a particularly important function in plan formulation because they are used to identify the amount of residential, commercial, industrial, and other urban land uses that will be needed to serve residents and workers in the Village of Kewaskum urban service area to the year 2010, the plan design year.

As part of the land use planning process, the standards listed in Chapter VI were applied to the selected population and employment levels projected under the intermediate-growth decentralized scenario presented in Chapter II to develop a set of urban land use and community facility requirements to be met by the plan. The process used to determine the year 2010 urban land use requirements for the Village of Kewaskum urban service area is graphically illustrated in Figure 29 and is described in the following paragraphs.

URBAN LAND USE REQUIREMENTS

Table 19 in Chapter VI sets forth per capita standards to be used to determine land use requirements in the year 2010. The per capita standards are intended to help estimate the total number of acres of land needed to satisfy requirements for various types of urban land uses. The per capita standards in Chapter VI are expressed in the following terms: for residential land requirements, the standards are based on the number of acres needed to accommodate 100 housing units for each type of residential development; for commercial and industrial land requirements, the standards are based on the number of commercial and industrial employees; and for recreational areas and governmental and institutional land uses, the requirements are based on the resident population of the urban service area.

Table 26 summarizes probable future urban land use requirements for the Village of Kewaskum urban service area through the year 2010. The amount of land needed for each urban land use category shown in Table 26 was determined by applying the appropriate land use development standard to the population and employment increase expected to occur between 1990 to 2010 and adding the result for each land use category to the amount of land devoted to each use in 1990. The more current 1992 existing land use data presented in Chapter IV were not used in this table because estimated 1992 employment and household size information was not available for land use calculation purposes. Table 26 indicates that about 340 acres of rural or undeveloped land within the Kewaskum area may be expected to be converted to urban use between 1990 to 2010.

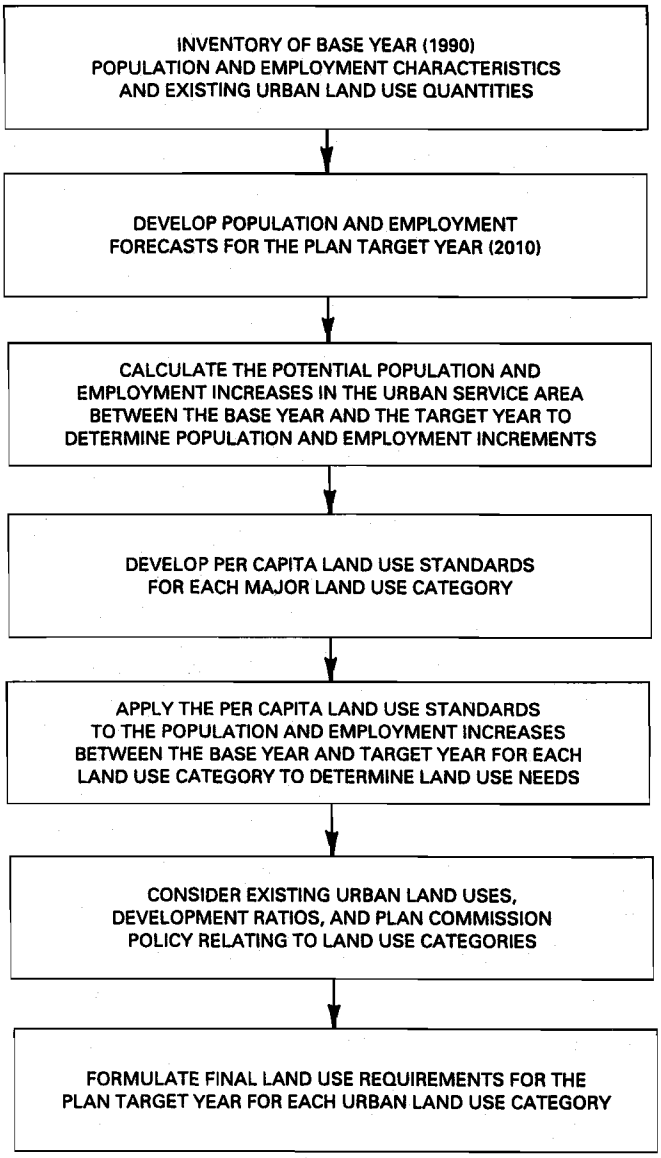
In addition to the per capita standards, Chapter VI also contains accessibility standards intended to assure that services such as schools, parks, and shopping centers are spatially distributed in a manner convenient and efficient for the population they are intended to serve. For example, the standards recommend that residents in a medium-density residential neighborhood areas be no more than 0.75 mile from a neighborhood park. Accessibility standards are used when designing and evaluating the land use plan. It should be recognized that in some situations, while per capita standards may be met, a need may still exist for additional sites or facilities because of the relative inaccessibility of an existing use or facility to some residents in the urban service area.

It is important to note that, while forecasts of future population and employment levels must be prepared and used in the application of land use standards, these forecasts involve uncertainty and, therefore, should be used with caution and be tempered by experienced judgment. Forecasts cannot take into account unpredictable events that may have major effects upon future conditions. The validity of the need and amount of land for each land use category determined through the application of the standards to forecast population and employment levels must, therefore, be periodically reexamined by the Village Plan Commission.

While many of the objectives and standards applied in the plan design process relate to the resident population and work force to be served, one of the most important objectives, the one relating to the

Figure 29

PROCESS USED TO DETERMINE YEAR 2010 URBAN LAND USE REQUIREMENTS FOR THE VILLAGE OF KEWASKUM URBAN SERVICE AREA



Source: SEWRPC.

preservation and protection of the underlying and sustaining natural resource base, is, in effect, independent of any resident population level. Preservation of the environmental corridors within the planning area in an essentially open, natural state and preservation of important agricultural lands are necessary to achieve this important objective.

Residential Development

The amount of residential land needed in the urban service area by the year 2010 was calculated by dividing the forecast year 2010 household population of about 3,900[1] by 2.40 persons per household, which is the average household size anticipated in the year 2010 under the selected intermediate-growth decentralized forecast scenario. The overall result indicates that a total of about 1,625 occupied housing units will be needed in the urban service area in the year 2010. In 1990, there were about 900 housing units in the Village; therefore, an additional 725 housing units will be needed between 1990 and 2010 to accommodate the need for housing in the year 2010.

These additional housing units were distributed among the four residential density classifications as noted in Table 27 in order to meet the Village's desired housing mix for the plan design year 2010 as identified in the housing standards set forth in Chapter VI under Housing Objective No. 8. This table also provides a comparison of the housing mix in the Village in 1990 with the Village's desired housing mix for the plan design year 2010, considering historic and current housing trends that may continue into the future. Once the number of additional housing units within each density classification was determined, the standards were applied to calculate the number of acres needed to accommodate the additional units. An additional 20 percent of land was added to the resulting incremental acreages to allow for site suitability considerations and housing vacancies and to provide for market choice.

As shown in Tables 26 and 27, approximately 210 acres of additional land will be needed in the Village of Kewaskum urban service area to provide housing for the household population of approximately 3,900 anticipated by the year 2010 under the

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[1]*The total forecast population of the Village of Kewaskum urban service area in the year 2010 is 4,060 persons. Of this total, it is anticipated that approximately 160 persons, or about 4 percent of the total population, will reside in housing units located in either group-quarters or commercial buildings, which will result in a household population of approximately 3,900 persons.*

Table 26

SELECTED LAND USE REQUIREMENTS FOR THE VILLAGE OF KEWASKUM URBAN SERVICE AREA: 2010

Urban Land Use Category	Existing Urban Land Uses: 1990		Estimated 1990 Numbers[b]	1990 Development Ratios	Development Standards	Planned Increment: 1990-2010[c]	Required Incremental Land Use Acreages per Development Standards	Required Incremental Land Use Acreages After Consideration of 1990 Gross Acres[d]	Year 2010 Forecast Numbers[b]	Total Urban Land Requirements: 2010	
	Gross Acres[a]	Percent of Total								Gross Acres[a]	Percent of Total
Residential											
Single-Family Dwellings											
Low-Density (20,000- to 65,339-square-foot lots)	34.6[e]	8.0	40 dwelling units	86.5 acres per 100 dwelling units	88.0 acres per 100 dwelling units	25 dwelling units	22.0	26.4	65 dwelling units	61.0	7.8
Medium-Density (7,200- to 19,999-square-foot lots)	194.8[f]	44.9	565 dwelling units	34.5 acres per 100 dwelling units	32.0 acres per 100 dwelling units	345 dwelling units	110.4	132.5	910 dwelling units	327.3	42.1
Single-Family Dwellings Subtotal	229.4	52.9	605 dwelling units	--	--	370 dwelling units	132.4	158.9	975 dwelling units	388.3	49.9
Two-Family Dwellings											
Medium-High-Density (6.1 to 7.3 dwelling units per net residential acre)	6.0	1.4	90 dwelling units	6.7 acres per 100 dwelling units	17.0 acres per 100 dwelling units	72 dwelling units	12.3	14.7	162 dwelling units	20.7	2.7
Multi-Family Dwellings											
High-Density (7.4 to 21.8 dwelling units per net residential acre)	17.1	3.9	205 dwelling units	8.3 acres per 100 dwelling units	10.0 acres per 100 dwelling units	283 dwelling units	28.3	33.9	488 dwelling units	51.0	6.5
Residential Subtotal	252.5	58.2	900 dwelling units[f]	--	--	725 dwelling units	173.0	207.5	1,625 dwelling units	460.0	59.1
Commercial	40.3	9.3	170 retail trade employees 210 service employees	10.6 acres per 100 commercial employees[g]	6.0 acres per 100 retail trade employees 2.0 acres per 100 service employees	-10 retail trade employees 80 service employees	1.6	1.6	160 retail trade employees 290 service employees	41.9	5.4
Industrial	31.1	7.2	900 employees[h]	3.5 acres per 100 employees	9.0 acres per 100 employees	670 employees[h]	60.3	110.2[i]	1,570 employees[h]	141.3	18.2
Government and Institutional	68.3	15.7	2,514 persons	27.2 acres per 1,000 persons	12.0 acres per 1,000 persons	1,546 persons	18.6	18.6	4,060 persons	86.9	11.2
Recreational[j]	41.5[k]	9.6	2,514 persons	10.1 acres per 1,000 persons[l]	3.9 acres per 1,000 persons	1,546 persons	6.0	6.0	4,060 persons	47.5[k]	6.1
Total	433.7	100.0	--	--	--	--	259.5	343.9	--	777.6	100.0

[a] *Gross area includes associated street rights-of-way and off-street parking areas for each land use category. The 1990 gross area pertains to the urban land uses within the Village corporate limits.*

[b] *The estimated 1990 and forecast 2010 population and employment numbers are expressed in number of housing units for residential land use categories; number of employees for commercial and industrial land use categories; and total population for governmental, institutional, and recreational land use categories.*

[c] *See Table 27 for further details on how the planned increments for the residential land use categories were derived.*

[d] *The figures in each residential land use category include 20 percent more land, in addition to that required by applying the development standards, to provide for site suitability consideration, housing vacancies, and market choice.*

[e] *Includes one rural residential lot totaling 5.25 acres; however, only 2.50 acres of the developed residential portion on this lot is included in this category. The other 2.75 acres were nonurban land uses such as open lands containing environmentally significant natural resources.*

[f] *Includes approximately 3.25 acres of land that contain about 20 single-family dwelling units located on lots less than 7,200 square feet in size.*

[g] *Commercial employees include retail trade and service employees. Information on the number of retail trade employees and service employees occupying commercial land was not available in order to determine separate 1990 development ratios for retail trade employees and service employees.*

[h] *The estimated total employees include industrial employees and transportation, communication, and utilities employees.*

[i] *Based on the recent trend of existing industrial uses expanding or relocating to larger parcels of land where the amount of land required per employee has increased, the industrial development standard of acres acres per industrial employee was applied to the total forecast of 1,570 "industrial" employees. It is assumed that existing industrial lands will either be operated by fewer employees or be redeveloped for other type of land uses.*

[j] *This category includes only areas for intensive outdoor recreation activities.*

[k] *Includes approximately 16 acres of privately-owned lands for intensive outdoor recreational activities such as the Hon-E-Kor Golf and Country Club and Holy Trinity Catholic Church recreation facilities.*

[l] *The development ratio is based only on the amount of public recreational land per 1,000 persons.*

Source: U. S. Bureau of the Census; Wisconsin Department of Industry, Labor and Human Relations; and SEWRPC.

Table 27

SUMMARY OF RESIDENTIAL LAND USE AND DWELLING UNIT REQUIREMENTS FOR THE VILLAGE OF KEWASKUM URBAN SERVICE AREA: 2010

Category	Year 1990				Planned Increment: 1990-2010				Year 2010			
	Gross Area[a]		Estimated Dwelling Units		Incremental Land Use[a]		Incremental Dwelling Units		Total Land Requirement[a]		Forecast Dwelling Units[b]	
	Acres	Percent of Total	Number	Percent of Total	Acres	Percent of Total	Number	Percent of Total	Acres	Percent of Total	Number	Percent of Total[c]
Single-Family Dwellings												
Low-Density (20,000- to 65,339-square-foot lots)	34.6[d]	13.7	40[d]	4.4	26.4	12.7	25[d]	3.5	61.0	13.3	65[d]	4.0
Medium-Density (7,200- to 19,999-square-foot lots)	194.8[e]	77.1	565[e]	62.8	132.5	63.8	345	47.6	327.3	71.1	910	56.0
Single-Family Dwelling Subtotal	229.4	90.8	605	67.2	158.9	76.5	370	51.1	388.3	84.4	975	60.0
Two-Family Dwellings												
Medium-High-Density (6.1 to 7.3 dwelling units per net residential acre)	6.0	2.4	90	10.0	14.7	7.1	72	9.9	20.7	4.5	162	10.0
Multi-Family Dwellings												
High-Density (7.4 to 21.8 dwelling units per net residential acre)	17.1	6.8	205	22.8	34.0	16.4	283	39.0	51.1	11.1	488	30.0
Total	252.5	100.0	900[f]	100.0	207.6	100.0	725	100.0	460.1	100.0	1,625[f]	100.0

[a] *Includes associated street right-of-way and off-street parking area. The 1990 gross area pertains to the residential land uses within the Village corporate limits.*

[b] *In the year 2010, one dwelling unit in the Village of Kewaskum urban service area is forecast to house approximately 2.40 persons.*

[c] *The percent breakdown of dwelling unit types is from the housing standards established in Chapter VI.*

[d] *One existing rural-density residential dwelling unit is included in the low-density residential category since the lot on which this unit is located may be converted into a low-density type of residential land use character. Although the table does not plan for dwelling units to be located on large lots classified as "rural" or "suburban" residential lots that are 1.5 acres or greater in size, this does not imply that such lots may not exist in the Village urban service area in the year 2010. Such large lots may result from farm consolidation and the preservation of significant environmentally sensitive natural resources.*

[e] *Includes a total of approximately 3.25 acres of land containing about 20 single-family dwelling units located on lots less than 7,200 square feet in size.*

[f] *These figures do not incorporate the approximately 4 percent of the total population that lived in dwelling units located in commercial buildings, since the commercial use is considered the principal land use of the property. It is assumed that approximately 4 percent of the total population will live in either group-quarters or dwelling units located in commercial buildings by the year 2010.*

Source: SEWRPC.

selected intermediate-growth decentralized forecast. As shown in these two tables, the number and types of dwelling units needed was broken down into four residential density classifications in order to provide for a wide range of housing choice in the Village. Even though these tables do not plan for large lots classified as "rural" or "suburban residential" in the Village of Kewaskum urban service area, this does not imply that such lots will not exist in the urban service are in the year 2010. Lots of 1.5 acres or larger may exist in the Village as a result of farm consolidation or as a result of the creation of large lots in environmental corridors and other environmentally sensitive areas.

The four residential density classifications and the associated acreage and housing units needs for the year 2010 are summarized in Table 27. As indicated in this table, there will be a need for an additional 26 acres, or about 25 dwelling units in low-density residential development, on 20,000- to 65,339-square-foot single-family residential lots. This represents 13 percent of the total year 2010 incremental residential land use needs. Some 133 acres, or about 345 dwelling units in medium-density single-family residential development, on 7,200- to 19,999-square-foot single-family residential lots will be needed, representing about 64 percent of the total year 2010 incremental residential land use needs. Some 15 acres, or about 72 two-family type dwelling units, ranging from 6.1 to 7.3 dwelling units per net residential acre, will be needed. This is about 7 percent of the total year 2010 incremental residential land use needs. An additional 34 acres, or about 283 multi-family dwelling units in high-density residential development with 7.4 to 21.8 dwelling units

per net residential acre, will be needed. This represents about 16 percent of the total year 2010 incremental residential land use needs. As reflected in Table 26, new residential growth will generate additional urban land needs in other land use categories, including commercial, industrial, governmental and institutional, and recreational uses.

Commercial Development

To meet the net forecast increase of about 70 jobs by the year 2010 in commercial employment within the Village of Kewaskum urban service area, an additional two acres of commercial land will be needed, as indicated in Table 26. Commercial employees include those employed in the retail trade and service categories shown on Table 10 in Chapter II. This represents an increase of about 5 percent over the 1990 level of about 40 acres of commercial land use.

Although the total number of commercial employees in the retail employment category is forecast to decrease, it is assumed that these employees may shift to the service employment category, which is forecast to increase. It is also important to note that the Village of Kewaskum is perceived as the gateway to the Kettle Moraine State Forest—Northern Unit, supported by such other recreational attractions as Hon-E-Kor golf course and the Sunburst Ski hills, thus attracting tourists to the area. Therefore, the application of the development standard for commercial land uses set forth in Table 26 may be exceeded, since future commercial developments would probably serve a larger population, such as tourists, than merely the Village urban service area. To the extent that the community may wish to promote economic development in an effort to exceed the historic and forecast rates, the actual area required could exceed the initial forecast two-acre commercial land increment before the year 2010. New commercial developments should be located within the urban service area in accordance with the objectives and standards outlined earlier in Chapter VI.

Industrial Development

Table 26 indicates that there will be a need for about 110 additional acres of industrial land in the Village urban service area by the year 2010. This increase is a result of the anticipated increase in industrial employment from about 900 jobs in 1990 to about 1,570 jobs in the year 2010, an increase of about 670 employees. Industrial employees include those employed in the industrial and the transportation, communications, and utilities categories shown in Table 10 in Chapter II. It was presumed that the employees in the transportation, communications, and utilities categories in the Kewaskum area would consist primarily of busing and trucking workers. Lands containing such work would ultimately be delineated as industrial uses on the recommended land use plan. In general, new industrial uses should be located near supporting transportation facilities, such as railroads and major arterial streets and highways, and near sewer and water supply facilities, pursuant to the objectives and standards set forth in Chapter VI.

Governmental and Institutional Development

As indicated in Table 26, The Village of Kewaskum may be expected to need an additional 19 acres of governmental and institutional lands by the year 2010, an increase of about 27 percent over the 1990 level of approximately 68 acres. This additional land required for governmental and institutional uses may be expected to be occupied by churches, health-care facilities, day-care facilities, and other public- and private-sector institutional uses.

Recreational Development

SEWRPC Planning Report No. 27, A Regional Park and Open Space Plan for Southeastern Wisconsin—2000, and SEWRPC Community Assistance Planning Report No. 136, A Park and Open Space Plan for Washington County, both contain specific recommendations addressing the needs of the Village. These recommendations are described in Chapter V and include the preservation of primary and secondary environmental corridors and prime agricultural lands and the provision of resource-oriented and nonresource-oriented recreation sites and facilities. On the basis of the analysis presented in Table 26, the urban service area will require about six acres of additional recreational lands for intensive, nonresource-oriented recreation activities, an increase of about 14 percent over the 1990 recreational land areas of about 42 acres. It is important to note that the land use calculation under this category identifies only the amount of land needed for such intensive public outdoor recreational activities as baseball, softball, soccer, and tennis and does not include natural, open spaces that may be a part of a park nor potential increases of private recreational facilities.

TRANSPORTATION SYSTEM REQUIREMENTS

In this report the transportation system is regarded only as a land use, but a very important one. Transportation facilities, especially arterial streets

and highways, are among the most critical land use elements influencing the spatial distribution of urban development within the Kewaskum area. The relative availability of transportation facilities will influence the path and mode and frequency of personal travel. The accessibility of a site to concentrations of population and employment and to community facilities and services will influence the type and intensity of urban development. This accessibility is, in turn, a function of the transportation system. Thus, transportation facilities are an important determinant of the location and form of urban development and, to a considerable extent, determine the efficiency of all other functional elements of such development. In the preparation of the land use and street system plans for the Village of Kewaskum urban service area, all existing transportation plans relating to the Kewaskum area were considered.

Arterial Street and Highway System Plan

The arterial street system provides the framework for land use development in the Kewaskum area. In this respect, the arterial street and highway system serves several important functions. It provides for the free movement of traffic throughout the Kewaskum area and for the ready access of this traffic through connecting collector and minor land-access streets to the various land uses within the area. In addition, the arterial street and highway system, together with the collector and minor land-access streets, serves as an important part of the urban stormwater-drainage system, as the location for utilities serving the various land uses, and as open space admitting light and air to building sites.

Map 20 in Chapter V shows the arterial street and highway facilities required to serve the probable future traffic demands within the Kewaskum planning area, as recommended in SEWRPC Planning Report No. 41, A Regional Transportation Plan for Southeastern Wisconsin: 2010, December 1994. This map identifies the jurisdictional responsibilities of the State, County, and local municipalities for the construction, maintenance, and operation of arterial streets and highways shown on the map. This map also indicates the number of traffic lanes needed for each arterial street segment in the Kewaskum planning area to carry the anticipated arterial traffic volumes through the design year 2010. Figure 4 of Chapter VI illustrates the types of street cross-sections which could be used to accommodate the proposed number of traffic lanes recommended on Map 20.

"Park-and-Pool" Lot

The abovementioned regional transportation system plan also recommended that a "park-and-pool" lot be provided in the Village, adjacent to USH 45. The Village of Kewaskum Plan Commission concurred with this recommendation and determined that such a park-and-pool lot should be provided near the intersection of USH 45 and CTH H in the Village. Even though the Village has aggressively pursued plans to develop this lot, the facility has not been constructed yet. The increase in the number of occupants per vehicle by carpooling will, in turn, reduce vehicular travel demand, fuel consumption, emission of air pollutants, and capital improvement costs for arterial streets and highways.

Railroad Facility

Railway freight service is provided to the Kewaskum area by Wisconsin Central (WC) Transportation Corporation, which purchased the Fox River Valley Railroad Company in 1994. This common carrier railroad service is provided over the WC's main line from Milwaukee to Green Bay via Fond du Lac. The line passes through the Village of Kewaskum, west of the Milwaukee River, and can serve as a focus for the location of certain future land uses.

Pedestrian, Bicycle, and Recreation Trail Facilities

Pedestrian walkways, bikeways, and other linear recreation facilities should be an integral part of a transportation system plan and of the land use and street system plan for the Village of Kewaskum urban service area. These types of facilities serve both utilitarian and recreational purposes and, therefore, should be considered whenever streets are improved or constructed in order to provide for convenient and safe alternative means of travel to automobile travel. Similar to a street system plan, a plan for trail-oriented facilities will also provide accessibility to and from homes, workplaces, and community facilities and services like shopping centers, parks, and schools. The preparation of such a plan for the Village of Kewaskum urban service area will ultimately help promote a more energy-efficient and environment-conscious community. This system should be carefully integrated with land uses and the aforereferenced street network system. The plan would further refine the adopted regional bicycle way system plan as related to the Kewaskum planning area shown on Map 21 in Chapter V. Figure 4 in Chapter VI illustrates the type of cross-sections which could be used to accommodate pedestrian and bicycle traffic.

COMMUNITY FACILITY NEEDS

In addition to providing guidance for land use development within the Kewaskum planning area, this plan is also intended to indicate the need for expanded or new community facilities. Accordingly, estimates of additional lands needed for public school facilities, governmental offices, the public library, and fire stations are discussed below. The estimates are based on the best information available, but further in-depth studies will need to be conducted prior to any expansion activities. An assessment of the long-term qualitative and quantitative needs for these facilities should be conducted at least once every 10 years so that the community can plan for the level of services it wishes to provide.

Public Schools

The entire Kewaskum planning area is located within the Kewaskum School District; however, in 1993, the 24-square-mile planning area covered only about 17 percent of the total area of the District, about 142 square miles. Of the total 1,784 students that attended the Kewaskum public schools in the 1992-1993 school year, approximately 20 percent lived in the Village of Kewaskum. The six public schools located in the Kewaskum School District, Kewaskum High School, Kewaskum Middle School, Kewaskum Elementary School, Wayne Elementary School, Farmington Elementary School, and Beechwood Elementary School, which was closed in 1986, have a combined capacity of 1,950 students. As indicated in Chapter II, the school-age population, ages five to 19, within the Kewaskum planning area may be expected to range from about 720 children under the low-growth forecast to about 1,690 children under the high-growth forecast, representing a range from a decrease of about 20 percent to an increase of about 88 percent over the 1990 school-age population. If the future population reaches the higher end of the forecast range by the year 2010, there may be a need for additional education and attendant recreation facilities within the Kewaskum planning area.

During the planning process, the Kewaskum School District completed a school facility study to determine if additional facilities should be provided to meet future needs that go beyond the recent remodeling and renovating of the interior of both the Kewaskum High School and Middle School. The options still under consideration include the Kewaskum Elementary School being remodeled, replaced, or relocated to the Middle School. The land use plan herein should include any additional land needed as a result of the aforementioned study and future school facility decisions.

The School District continues to study options addressing both the short-term, five years, and long-term needs for future school facilities. The population of different groups of school-age children can vary dramatically over a five-year period as well as over a 20-year period, thus changing the demand for school facilities. Other important considerations are school district enrollment from areas outside the planning area and the need for laboratories, special-education classrooms, or other facilities required by the State. Issues that should be addressed include whether the facility needs can be met by expanding the existing facilities on existing sites, by reorganizing the grades to be served by each school, or by constructing new facilities which may or may not lie within the Kewaskum planning area. These decisions may be expected to be further influenced by the present condition of school facilities, the quality of services desired, and the busing distances desired. Any comprehensive study undertaken by the School District should be conducted within the framework of the land use and transportation system plan for the development of the Village and in cooperation with local government officials and planning agencies.

Village Hall and Governmental Offices

Chapter IV noted that the Village Hall is located in the Municipal Building, which was renovated in 1985 to house the police department, library, administrative offices, Village Board chambers, and a community room. The Village is contemplating the relocation of the library and community room from the present Municipal Building to the old Sentry Food Store site purchased by the Village, which would free space for any future expansion needed. Except for the library and community room, the Village anticipates that the governmental operations, including the police department, will continue in the present location to the year 2010. The Village Plan Commission determined, however, that the amount of parking space on the site and nearby is inadequate for meeting future parking demand. It may be necessary to expand to the north and east in order to provide additional parking spaces. It is recommended that the Village retain a consultant to study the future spatial needs and desirable arrangement of the Village governmental activities on the current site prior to any expansion activities.

Table 28

COMPARISON OF TOTAL VOLUMES IN SELECTED PUBLIC LIBRARIES IN THE SOUTHEASTERN WISCONSIN REGION SERVING POPULATIONS BETWEEN 3,000 AND 10,000: 1993

Location of Public Library	Estimated Service Population	Total Book Volumes	Total Volumes per Capita
Milwaukee County			
Hales Corners	7,825	37,287	4.8
St. Francis	9,319	35,266	3.8
Ozaukee County			
Saukville	4,420	17,360	3.9
Racine County			
Union Grove	6,862	35,413	5.2
Waterford	4,880	24,900	5.1
Walworth County			
East Troy	6,243	15,978	2.6
Fontana	3,703	18,179	4.9
Walworth	3,729	16,777	4.5
Williams Bay	4,763	14,764	3.1
Washington County			
Kewaskum	5,213	14,482	2.8
Slinger	5,430	13,099	2.4
Waukesha County			
Delafield	7,534	38,875	5.2
Eagle	4,483	18,235	4.1
Elm Grove	8,199	33,382	4.1
Hartland	9,516	36,544	3.8
Mukwonago	6,720	19,413	2.9
North Lake	8,628	32,902	3.8
Pewaukee	7,258	34,096	4.7
Average	6,374	25,378	4.0

Source: State of Wisconsin, Department of Public Instruction, Division for Library Services, Wisconsin Library Service Record: 1993, Madison, Wisconsin, and SEWRPC.

Public Library

As further stated in Chapter IV, the Kewaskum Public Library, located in the Municipal Building, occupied about 3,150 square feet of floor area, with a collection of 14,482 volumes in 1993. Table 28 provides a comparison of the total number of books and the total population, ranging from 3,000 to 10,000 persons, served by community libraries in Southeastern Wisconsin, including the Kewaskum Public Library. Table 28 also provides data on the total number of books per capita held by each of the community libraries listed. In 1993, the average number of books per capita for the community libraries listed in this table was 4.0; for the Kewaskum Public Library this figure was 2.8, one of the lowest of the community libraries listed. The number of books per capita provided by the Kewaskum Public Library is within the range of two to four books per capita recommended by the adopted regional library facilities and services plan[2] for libraries serving a population of less than 25,000 persons. The average number, 4.0 books per capita,

[2]*SEWRPC Planning Report No. 19, A Library Facilities and Services Plan for Southeastern Wisconsin, July 1974, page 80.*

for all the community libraries and 2.8 books per capita for the Kewaskum Public Library in Table 28, however, are less than the 5.0 volumes per capita recommended in the Wisconsin Public Library Standards[3] for library service populations ranging from 4,000 to 7,999 persons.

On the basis of recommended standards found in two sources,[4] the minimum total floor area of a small public library serving a population of less than 10,000 persons should range between about 0.7 to 1.0 square foot per capita served. Application of this standard to the year 2010 projected library service population ranging from about 6,400 to 6,800 persons[5] indicates that a library with approximately 4,500 to 6,800 square feet of floor area should be provided. Depending on the level of service provided and other related factors, the library facility could be as large as 7,000 to 8,000 square feet in size. By the year 2010, the library should house between 32,000 to 34,000 books, on the basis of the aforementioned year 2010 projected population range and the State standard of 5.0 book volumes per capita. Since the size of, and the number of books in, the current library are below the minimum standards, the library should be expanded during the planning design period.

As recommended in the adopted regional library facilities and services plan, community libraries such as the Kewaskum Public Library should be planned, at a minimum, to meet the State's library building standards. The most current State library standards are specified in Wisconsin Library Building Project Handbook, 1990, Public Library Space Needs: A Planning Outline, 1988, and Wisconsin Public Library Standards, 1987, published by the Wisconsin Department of Public Instruction. The size of the building may vary, depending on the qualitative and quantitative level of service the community wishes to provide. As discussed earlier, the Village of Kewaskum purchased the old Sentry Food Store site. This site could accommodate a multi-purpose library and community center, providing space for other types of activities as well, such as shows, meetings, and classes. The Village expressed a need for a larger community meeting room which could also be accommodated on this site. Because of various factors that may affect the spatial requirements, the Village, in cooperation with the Village Library Board and other community-oriented committees, should conduct a comprehensive study to definitively determine the future spatial needs for both a community library and a community center.

Fire Station

Fire station location is an important determinant of the quality of fire protection in a community. As noted in Chapter IV, the Village and Town of Kewaskum and part of the Town of Auburn in Fond du Lac County are served by the Village of Kewaskum Fire Department. The Department's equipment is housed in the Kewaskum Fire Station, located at 1106 Fond du Lac Avenue (USH 45), Village of Kewaskum. The approximately 13,776-square-foot station was constructed on the 2.3-acre site in 1975. The Village determined that the site contains sufficient space to accommodate any future expansion needed to store additional ambulances and fire-fighting equipment to the design year 2010. The Department has reciprocal service agreements with the surrounding community fire departments for additional fire-protection services if needed.

By analyzing Map 13 in Chapter IV and Map 23 in Chapter V, it can be determined that the existing urban developments in large concentrated areas and future urban developments that may occur within the adopted sanitary sewer service area will lie largely within 1.5 "road miles," or length of streets and response lines, from the existing engine company, as recommended by the Insurance Services Office. Accordingly, it appears the present

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[3]*Wisconsin Library Building Project Handbook (Madison, Wisconsin: Department of Public Instruction, 1990).*

[4]*Rolf Myller, The Design of the Small Public Library (New York: R. R. Bowker Co., 1966), pp. 20 and 21; and Nolan Lushington and Willis N. Mills, Jr., Libraries Designed for Users: A Planning Handbook (Hamden, Connecticut: Library Professional Publications, 1980), pp. 48 and 49.*

[5]*Since the actual library service area is unknown and yet likely extends beyond the Kewaskum planning area, the future population served by the library could be estimated on the basis of known historic population served by the library projected to the year 2010.*

fire station is ideally situated to serve urban development within the Kewaskum planning area to the year 2010.

This analysis, however, should not be considered a substitute for a more detailed study that should be conducted by the Village Fire Department to take into account a number of other factors that determine the adequacy of a community's future fire-protection services. Such influencing factors include the location and capacity of fire hydrants; the required number and type of fire-fighting equipment and personnel; the provision and quality of fire communication systems; the effects of narrow or one-way streets, steep topography, or other unusual locational conditions on adequate response; and the structural characteristics, including fire alarm and sprinkler systems, of buildings. As noted in Chapter IV, the Insurance Services Office (ISO) evaluates the adequacy of fire protection services provided by communities, including the Village of Kewaskum, by using the Fire Suppression Rating Schedule. Even though the ISO does not determine the level of fire-protection services that should be provided, the report generally contains recommendations over the years which have been accepted as guides by many municipal officials in planning improvements to their fire-protection services for correcting any serious deficiencies found.

Chapter VIII

THE LAND USE AND STREET SYSTEM PLAN

A comprehensive plan is an official statement of a municipality setting forth major objectives concerning the desirable physical development of the community. A land use plan and a street system plan comprise two important elements of such a comprehensive plan. The land use and street system plans presented herein are intended to be used as tools to help guide the physical development of the Kewaskum community into a more efficient and attractive pattern and to promote the public health, safety, morals, and general welfare of the community.

The community land use and street system plans are intended to constitute a refinement of the adopted regional land use and transportation system plans so that areawide, as well as local, development objectives can be met. The regional plans and, as a consequence, the Village land use and street system plans, recognize the effects and importance of the urban land market in shaping land use and travel patterns and seek to influence the operation of that market in order to achieve more healthful, attractive, and efficient community development. To this end the plans recommend that development trends be altered by encouraging new intensive urban development to take place only in those areas which are covered by soils suitable for such development, which are not subject to such environmental hazards as flooding, and which can be readily served by such essential municipal services as centralized sanitary sewer and public water supply. The plans also recommend urban development be discouraged from locating in primary environmental corridors and other environmentally sensitive lands.

The community land use and street system plans should promote the public interest rather than the interests of individuals or special groups. The very nature of these plans contributes to this purpose, because the plans facilitate consideration of the relationship of any development proposal, whether privately or publicly advanced, to the overall physical development of the entire community. These plans contribute to responsible democratic government by helping duly elected and appointed public officials safeguard and promote the public interest. The plans also contribute to democratic government by providing a focus for citizen participation in the planning and subsequent development process.

The plans are intended to assist in the political and technical coordination of community development. Political coordination seeks to assure, to the extent practicable, that a majority of the citizens within the community are in accord with, and working toward, the same goals. Technical coordination seeks to assure a logical relationship between private land use development and public works development so that the planning and scheduling of public and private improvements will be both effective and efficient and avoid conflict, duplication, and waste. Effective coordination of community development requires a unified, integrated plan if the physical elements of the environment are to be managed without costly conflicts of function and if the political forces of the community are to deal with controversial development issues, including the plan itself, in an equitable and constructive manner.

The community land use and street system plans are long-range plans, providing a means of relating day-to-day development decisions to long-term development needs in order to coordinate development through time to ensure that today's decisions will lead toward tomorrow's goals. In the case of Kewaskum, the land use plan and street system plans are intended to provide for the future, as well as the present, needs of the Village and its environs.

The land use and street system plans, however, should not be considered as rigid and unchangeable molds to which all development proposals must conform, but rather as a flexible guide to help local officials and concerned citizens review development proposals. As conditions change from those assumed as a basis for the preparation of these plans, the plans should be revised as necessary. Accordingly, the plans should be reviewed periodically to determine whether the development objectives set forth in Chapter VI of this report are still valid and to determine the extent to which the various objectives are being realized, over time, through plan implementation.

Together, the land use and street system plans presented here for the Kewaskum planning area

represent only one of many possible patterns of land use development that could accommodate the future physical, social, and economic needs of the residents of the Village and its environs. The selection of the final plan involved the comparative evaluation of alternative land use patterns and supporting community facility and utility proposals against the development objectives, principles, standards, and urban design guidelines previously described in this report, as well as significant citizen input during the planning process.

PLAN DETERMINANTS

Population Forecasts

The population forecast selected by the Village Plan Commission for use in the plan design process envisions that the Kewaskum urban service area will reach a resident population level of approximately 4,100 persons by the year 2010. This level represents an increase of about 1,600 persons, or almost 65 percent, over the 1990 level of about 2,500 persons. To accommodate this increase, Table 26 in Chapter VII indicates that approximately 730 additional housing units will need to be added by the year 2010 to the estimated 1990 stock of 900 housing units in the Village of Kewaskum. The forecast population increase may be expected to be accompanied by a need for additional urban land, as indicated in Table 26, for commercial, industrial, institutional, and recreational uses.

Employment Forecasts

The employment forecast selected by the Village Plan Commission for use in the plan design process envisions that the Kewaskum urban service area will reach an employment level of approximately 2,300 jobs by the year 2010. This represents an increase of about 750 jobs, or almost 50 percent, over the 1990 level. Of this total increase, it is estimated that about 80 jobs will be added in the service employment category, about 650 jobs will be added in the industrial employment category, and about 30 jobs will be added in such employment categories as transportation, governmental, and institutional. Retail trade and agricultural employment are expected to remain at about existing 1990 levels.

Each of the general employment categories may be related to specific land use requirements, as indicated in Table 26, and this, therefore, is useful in the allocation of land to commercial and industrial uses. Table 26 indicates that the forecast employment increase for these types of employment would require approximately two acres of additional commercial lands and approximately 110 acres of additional industrial lands by the year 2010. As noted earlier, in Chapter VII, the estimated increase for commercial land uses may be exceeded, since future commercial developments would probably serve both nonresident and resident populations of the Village urban service area. The Village of Kewaskum area is promoted as the gateway to the Kettle Moraine State Forest—Northern Unit, supported by other recreational attractions such as Hon-E-Kor golf course and the Sunburst Ski Area; thus the area may be expected to attract, in particular, nonresidents seeking recreational activities.

Objectives and Standards

Chapter VI of this report sets forth community development objectives and standards intended to guide the preparation of the land use and street system plans. The land use allocation standards and accessibility standards set forth in Tables 19 and 20 in Chapter VI, respectively, were important considerations in the design of these plans. The land use allocation standards were used to help estimate the number of acres in each land use category which may be expected to be needed to serve the resident population and employment levels by the year 2010. As indicated in Table 26 in Chapter VII, approximately 300 acres in the urban service area would need to be converted from rural to urban use over the planning period to accommodate, on the basis of these land use allocation standards, the anticipated population and employment increases. Accessibility standards, expressed as a service radii for facilities such as parks, schools, and shopping areas, were used to distribute needed facilities in locations that will be convenient to the population to be served.

The urban design guidelines established in Chapter VI were also used in the preparation of a detailed street and lot layout for the Kewaskum planned urban service area. Specifically, proposed lot lines, buffer strips, access-prohibition easements, street and cul-de-sac rights-of-way, and pedestrian or recreational trail access points are urban design features included in the detailed plans based upon these criteria. The urban design guidelines were also used as a basis for recommending potential solutions to urban design problems.

Kewaskum Urban Service Area

The existing planned sanitary sewer service area, or urban service area, for the Village of Kewaskum was delineated and adopted by the Village and the Regional Planning Commission in 1988 and is

documented in SEWRPC Community Assistance Planning Report No. 161, Sanitary Sewer Service Area for the Village of Kewaskum, March 1988. As shown in Map 23 of Chapter V, this plan shows the extent of the area envisioned to be served by sanitary sewer at least to the year 2000. The adopted planned sanitary sewer service area tributary to the Village of Kewaskum sewage-treatment facility could accommodate a resident population of about 4,900, somewhat higher than the selected forecast year 2010 population of 4,100.

To formulate more complete and comprehensive land use and street system plans for the urban service area, the Village Plan Commission determined that the plans should envision the full development for urban use of the planned sanitary sewer service area within the Kewaskum planning area. The total planned urban service area, as shown on Map 29, includes the adopted Village of Kewaskum sanitary sewer service area and certain adjacent lands. The inclusion of adjacent lands is needed to complete a full development pattern for the area and will help promote a desirable arrangement of land uses and street configuration. Accordingly, the land use and street system plans presented allocate somewhat more land to urban use than the minimum required to meet Village needs to the year 2010 as those needs are defined in Chapter VII.

Neighborhoods and Special Planning Districts

Inherent in the development of a comprehensive plan is the concept, long espoused by the Regional Planning Commission, that an urban area should be formed of, and developed in, a number of spatially organized, individually planned neighborhood units rather than as a single, large, formless mass.

As much as possible, each residential neighborhood should be bounded by arterial streets and highways; major park, parkway, or institutional lands; bodies of water and waterways; or other natural or cultural features that serve to define it clearly and physically distinguish it from the surrounding units. Ideally, each residential neighborhood should be provided, within reasonable walking and biking distances, necessary supporting local services needed by the residents, such as a public elementary school, local park, and local shopping facilities. As a practical matter, given the trends toward lower residential densities and household size and changes in the urban land market, particularly with respect to commercial development, it is often necessary for a single elementary school and one commercial center to serve two or more neighborhoods.

As part of the land use and street system planning effort, seven "subneighborhoods" and two special planning districts were identified within the Village of Kewaskum planned urban service area and environs. Map 28 shows the location of these subneighborhoods. These subneighborhoods do not meet the criteria for classification as neighborhood units in terms of a resident population that can support an elementary school or a neighborhood commercial center. The subneighborhoods were delineated so that they are bounded, insofar as possible, by such distinct land features as the Milwaukee River, the Wisconsin Central Transportation Corporation railroad right-of-way, and existing and planned arterial streets and highways, such as Fond du Lac Avenue (USH 45), STH 28, CTH V, CTH H, Badger Road, and Kettle View Drive.

One special planning district shown on Map 28 reflects the adopted master plan project boundaries for the Kettle Moraine State Forest—Northern Unit. This major park would accommodate intensive active and passive outdoor recreation activities as well as significant natural resources for open space preservation purposes. The other special planning district represents the Kewaskum Central Business District (CBD), an area proposed to consist primarily of commercial retail and service developments with residential use constituting a small percentage of overall land uses. Maps 28 and 33 show proposed boundaries for this district.

Map 28 also shows the recommended location of proposed elementary schools, parks, and commercial centers in relation to the subneighborhoods upon full development, together with existing neighborhood facilities.[1] Plan recommendations with respect to each type of facility within the planned urban service area are presented later in this chapter. It should be noted that, even though the plan desig-

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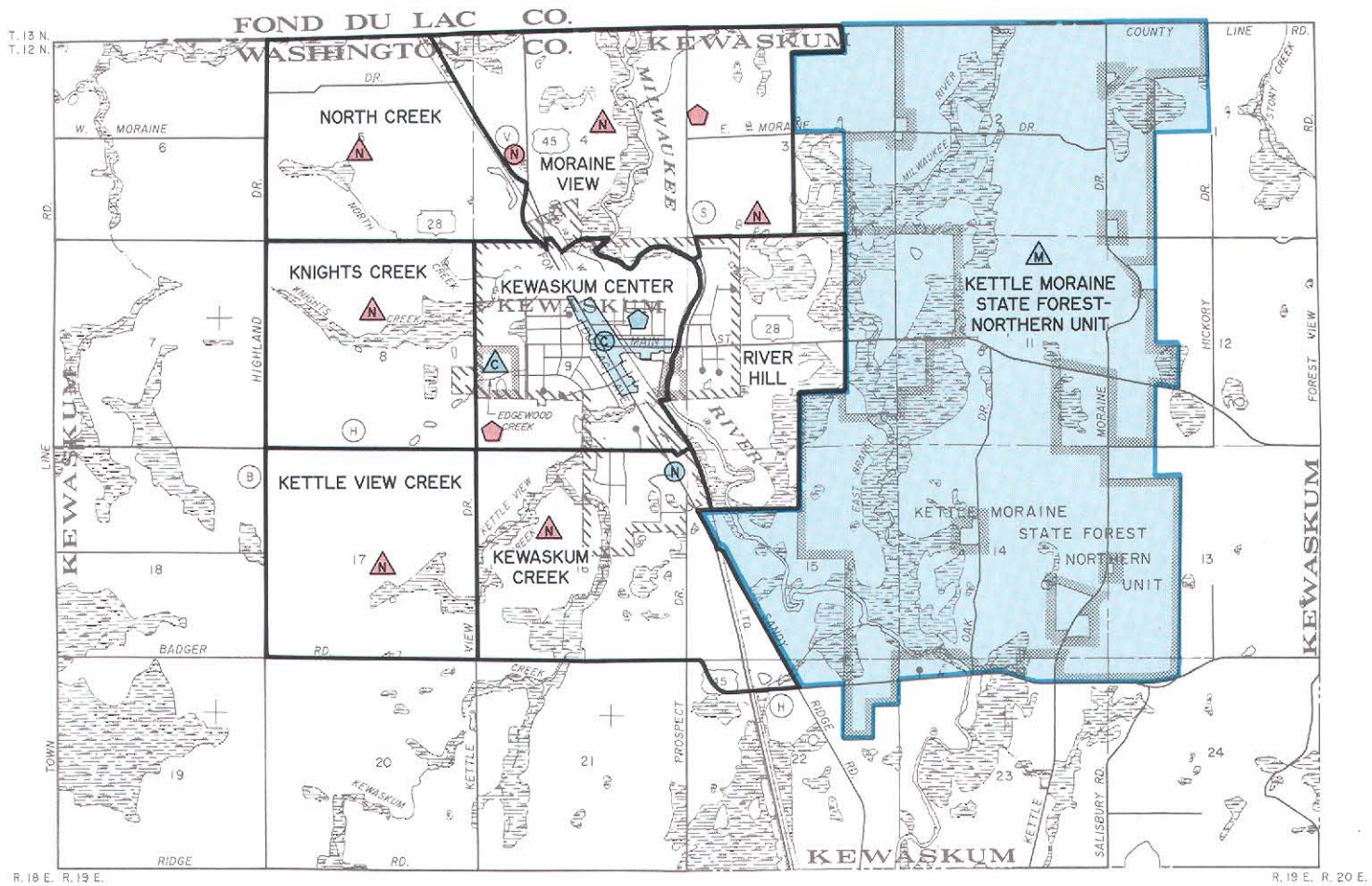
[1] *Map 28 shows general sites for neighborhood facilities needed within the planned urban service area and general sites for neighborhood facilities which may be expected to be needed if these areas are fully developed outside this area in the North Creek, Knights Creek, Kettle View Creek, and Moraine View subneighborhoods. Facility locations outside the planned urban service area in those subneighborhoods are identified on Map 28 in order that the units of government concerned may reserve land for future neighborhood parks and schools based on full development of those subneighborhoods. In the balance of this chapter, attention is focused on neighborhood facilities located within the planned urban service area.*

Map 28

POTENTIAL SUBNEIGHBORHOODS, NEIGHBORHOOD FACILITIES, AND SPECIAL PLANNING DISTRICTS IN THE KEWASKUM PLANNING AREA



LEGEND

- NEIGHBORHOOD BOUNDARY
- ADOPTED WISCONSIN DEPARTMENT OF NATURAL RESOURCES PROJECT BOUNDARY
- SPECIAL PLANNING DISTRICT

PUBLIC ELEMENTARY SCHOOLS

- EXISTING
- PROPOSED

PUBLIC PARKS

- EXISTING
- PROPOSED

N NEIGHBORHOOD PARK
C COMMUNITY PARK
M MAJOR PARK

COMMERCIAL CENTERS

- EXISTING
- PROPOSED

N NEIGHBORHOOD COMMERCIAL CENTER
C COMMUNITY CENTRAL BUSINESS DISTRICT

GRAPHIC SCALE
0 1/4 1/2 MILE
0 2000 4000 FEET

Source: SEWRPC.

nates a specific location for each of the facilities on the basis of preliminary analysis, precise site analysis and facility needs development plans should be conducted before development.

THE RECOMMENDED LAND USE PLAN FOR THE KEWASKUM PLANNING AREA

As shown on Map 29, the recommended land use plan for the Kewaskum planning area indicates those areas where urban development should be permitted and encouraged. The data in Table 29 compare existing 1990 and planned land uses in the Kewaskum planning area. Figure 30 illustrates graphically the differences between the 1990 and the recommended land uses in the planning area.

Environmental Corridors and Other Environmentally Significant Areas

To guide urban development and redevelopment effectively in the Kewaskum area into a pattern that is efficient, stable, safe, healthful, and attractive, it is necessary to consider carefully the location of the various land uses in relation to the natural resource base of the area. Locating new urban development outside environmental corridors and other environmentally sensitive areas will serve to maintain a high level of environmental quality in the community and will also avoid such costly development problems as flood damage, wet basements, failing foundations for structures and pavements, and the excessive infiltration of clear water into sanitary-sewerage systems.

Environmental Corridors: Environmental corridors are linear areas in the landscape that contain concentrations of high-value elements of the natural resource base. Within the Kewaskum area these corridors contain almost all of the best remaining woodlands, wetlands, and wildlife habitat areas, as well as floodlands and areas of steep slope where intensive urban development would be ill-advised. The protection of the primary environmental corridors[2] from additional intrusion by urban development is one of the principal objectives of the recommended land use plan. Under the plan, it is recognized that existing private and public outdoor recreation and related open space uses generally serve to protect such corridors. Therefore, the plan recommends that such uses be maintained for resource preservation and limited recreational purposes.

Primary environmental corridors occupied approximately 5,926 acres, or about 38 percent, of the Kewaskum planning area in 1990. Table 29 indicates that these corridors would occupy about 5,913 acres, or also about 38 percent of the planning area, under the recommended land use plan. This figure represents a decrease of about 13 acres, or less than 1 percent, from the 1990 level. This decrease may be attributed to locally committed urban development. The plan recommends that all remaining primary environmental corridors be preserved in essentially natural, open uses.

The secondary environmental corridors[3] in the Kewaskum planning area are generally associated with intermittent watercourses and contain large areas of wetlands and woodlands, as shown on the recommended plan. These corridors also serve to link segments of primary environmental corridors. Under the recommended plan, secondary environmental corridors would occupy about 199 acres, or 1 percent, of the Kewaskum planning area. This is a decrease of about 6 acres, or 3 percent, from the 1990 total of about 206 acres. This decrease is due primarily to development of small woodland areas for residential use. While not as significant as the primary environmental corridors in terms of overall resource values, it is recommended that, to the maximum extent practicable, the secondary corridors be preserved as the process of development proceeds within the Kewaskum planning area, particularly when the opportunity is presented to incorporate such secondary corridors into urban stormwater retention basins, associated drainageways, and public parks.

Isolated Natural Resource Areas and Other Environmentally Significant Lands: Isolated natural resource areas consist of areas with important natural resource values which are separated geographically from primary and secondary environmental corridors. Most of the isolated natural

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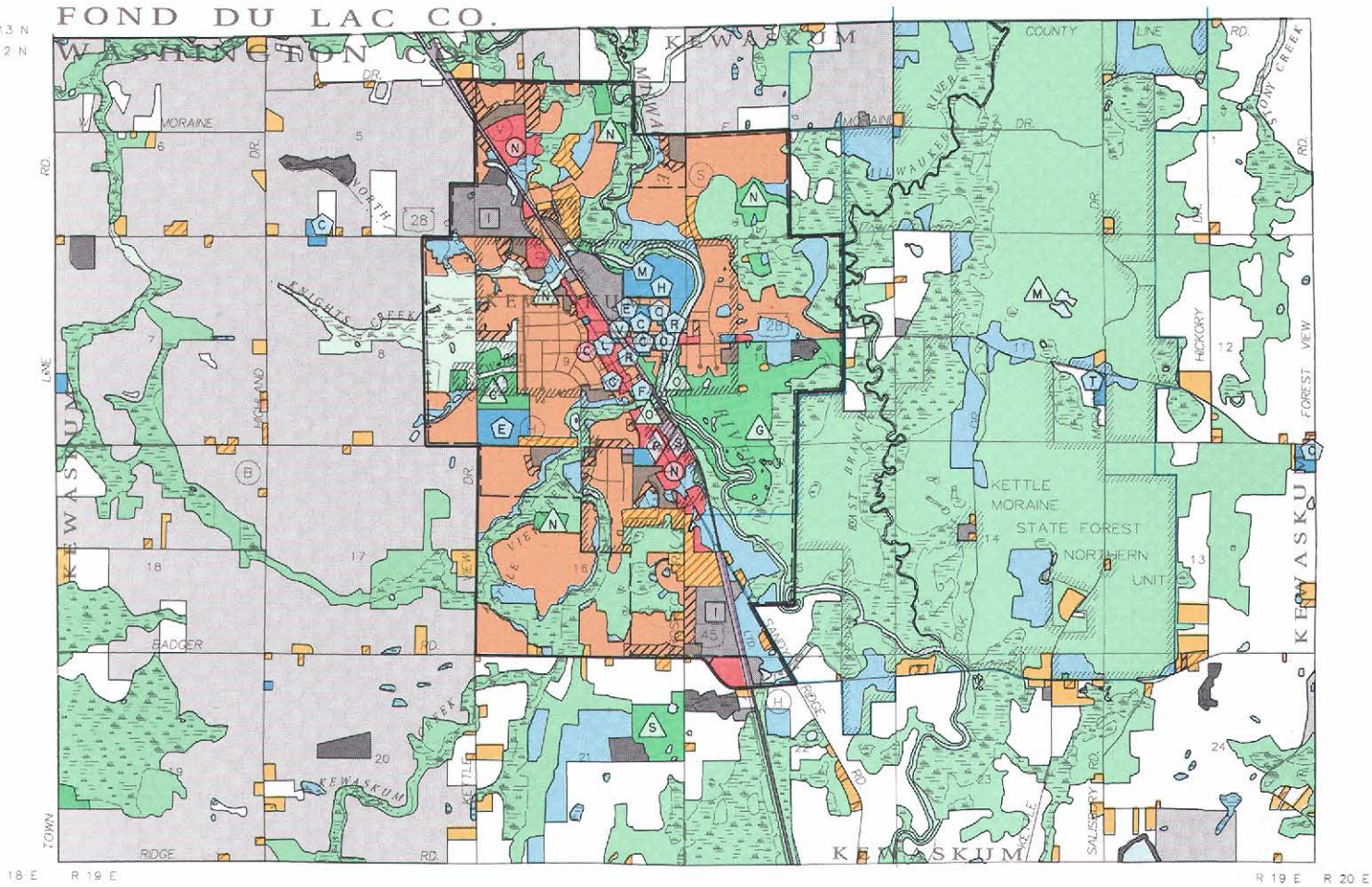
[2]*Primary environmental corridors are, by definition, at least two miles in length, 400 acres in area, and 200 feet in width.*

[3]*Secondary environmental corridors are, by definition, at least one mile in length and 100 acres in area. Such corridors that link or serve to connect primary environmental corridor segments, particularly when the secondary corridors are related to surface drainage, have no minimum area or length criteria.*

Map 29

THE RECOMMENDED LAND USE PLAN FOR THE KEWASKUM PLANNING AREA



LEGEND

- PLANNED URBAN SERVICE AREA BOUNDARY
- VILLAGE OF KEWASKUM PLANNED URBAN SERVICE AREA BOUNDARY: 2010
- ADOPTED WISCONSIN DEPARTMENT OF NATURAL RESOURCES PROJECT BOUNDARY

SINGLE-FAMILY RESIDENTIAL DEVELOPMENT

- SUBURBAN-DENSITY (1.5- TO 4.9-ACRE LOTS)
- LOW-DENSITY (20,000- TO 65,339-SQUARE-FOOT LOTS)
- MEDIUM-DENSITY (7,200- TO 19,999-SQUARE-FOOT LOTS)

TWO-FAMILY RESIDENTIAL DEVELOPMENT

- MEDIUM-HIGH-DENSITY (6.1 TO 7.3 DWELLING UNITS PER NET RESIDENTIAL ACRE)

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

- HIGH-DENSITY (7.4 TO 21.8 DWELLING UNITS PER NET RESIDENTIAL ACRE)

OTHER LAND USES

- COMMERCIAL DEVELOPMENT
  - N NEIGHBORHOOD COMMERCIAL CENTER
  - C COMMUNITY CENTRAL BUSINESS DISTRICT
- INDUSTRIAL DEVELOPMENT
  - I INDUSTRIAL PARK
- TRANSPORTATION AND UTILITIES
  - S SEWAGE TREATMENT PLANT
  - P PARK-AND-POOL LOT
- GOVERNMENTAL AND INSTITUTIONAL
  - V VILLAGE HALL AND POLICE DEPARTMENT
  - L LIBRARY/COMMUNITY CENTER
  - F FIRE STATION
  - O POST OFFICE
  - E PUBLIC ELEMENTARY SCHOOL
  - M PUBLIC MIDDLE SCHOOL
  - H PUBLIC HIGH SCHOOL
  - R PRIVATE SCHOOL
  - C CHURCH
  - T TOWN HALL
- PARKS AND RECREATION
  - M MAJOR PARK
  - C COMMUNITY PARK
  - N NEIGHBORHOOD PARK
  - O OTHER PUBLIC PARK AND RECREATION SITES
  - G GOLF COURSE
  - S SKI HILL
- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREAS
- OTHER OPEN LANDS TO BE PRESERVED
- PRIME AGRICULTURAL LANDS
- OTHER AGRICULTURAL AND RURAL LANDS
- SURFACE WATER

GRAPHIC SCALE
0 1/4 1/2 MILE
0 2000 4000 FEET

Source: SEWRPC.

Table 29

SUMMARY OF EXISTING 1990 AND RECOMMENDED LAND USE IN THE KEWASKUM PLANNING AREA

Land Use Category[a]	1990		Full Development Conditions[b]		Planned Changes	
	Acres	Percent	Acres	Percent	Acres	Percent
Urban						
Residential	557.0	3.5	1,373.9	8.8	816.9	146.7
Commercial	47.3	0.3	135.6	0.9	88.3	186.7
Industrial	57.7	0.4	146.4	0.9	88.7	153.7
Transportation and Utilities[c]	57.0	0.4	57.8	0.4	0.8	1.4
Governmental and Institutional	88.4	0.6	124.4	0.8	36.0	40.7
Recreational[d]	251.7	1.6	303.4	1.9	51.7	20.5
Urban Subtotal	1,059.1	6.8	2,141.5	13.7	1,082.4	102.2
Nonurban						
Primary Environmental Corridor[e]	5,925.7	38.0	5,912.6	38.0	-13.1	-0.2
Secondary Environmental Corridor[e]	205.7	1.3	198.5	1.3	-7.2	-3.5
Isolated Natural Resource Areas[e]	102.3	0.7	108.1	0.7	5.8	5.7
Prime Agricultural Lands[f]	4,853.5	31.2	4,002.7	25.7	-850.8	-17.5
Other Agricultural and Open Lands[g]	3,417.4	21.9	3,216.8	20.6	-201.6	-5.9
Extractive and Landfill	16.5	0.1	0.0	0.0	-16.5	-100.0
Nonurban Subtotal	14,521.1	93.2	13,438.7	86.3	-1,082.4	-7.5
Total	15,580.2	100.0	15,580.2	100.0	--	--

[a] *Street rights-of-way and off-street parking areas are included in the associated land use category.*

[b] *Assumes full development of the larger planned urban service area shown on Maps 29 and 32 that extends beyond the Village of Kewaskum 2010 urban service area.*

[c] *Includes only the railroad right-of-way and utility properties.*

[d] *Includes only areas for intensive outdoor recreational activities.*

[e] *Includes associated surface-water areas.*

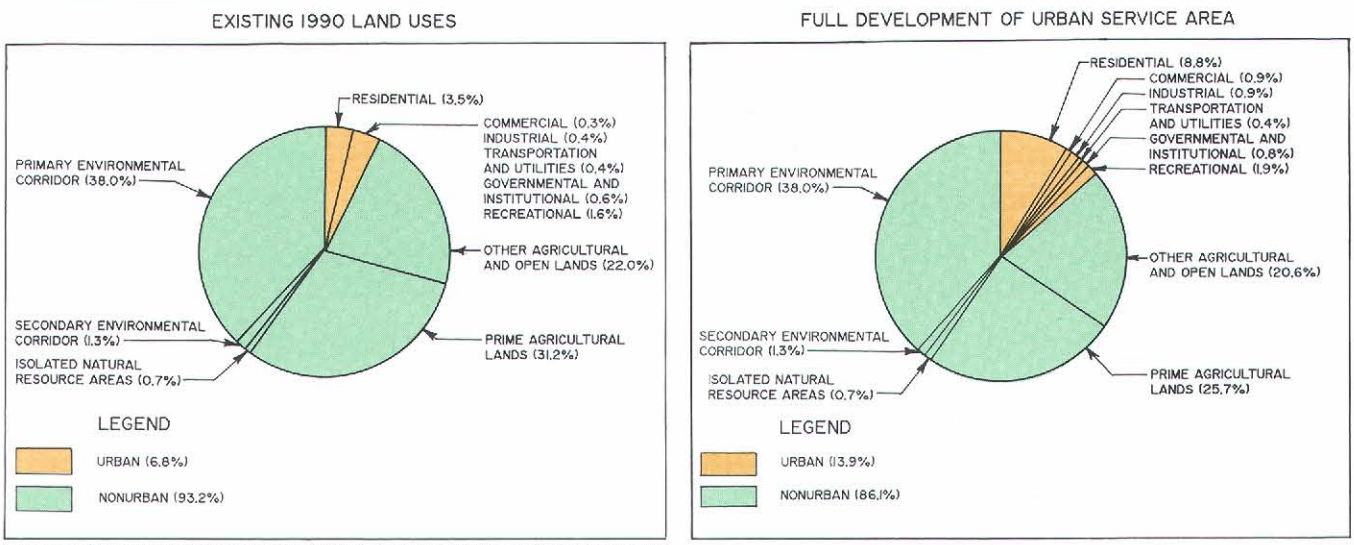
[f] *Includes related farm residences on prime agricultural land.*

[g] *Includes other farm and rural type residences on at least five-acre lots or equivalent overall density and the lands identified as "Other Open Lands to be Preserved" on Map 29.*

Source: SEWRPC.

Figure 30

COMPARISON OF EXISTING 1990 AND RECOMMENDED LAND USES IN THE KEWASKUM PLANNING AREA



NOTE: THE KEWASKUM PLANNING AREA TOTALS APPROXIMATELY 15,580 SQUARE MILES. SEE MAP 29.

Source: SEWRPC.

resource areas in the planning area consist of wetlands or tracts of woodlands that are at least 200 feet wide and five acres in area. Isolated natural resource areas, under the recommended plan, would occupy approximately 108 acres, or 1 percent of the total planning area, an increase of about 6 acres, or 6 percent, from the 1990 total of about 102 acres. This increase is due primarily to reclassification of a remnant primary environmental corridor. The plan recommends that careful consideration be given to preserving such areas in open uses. When urban development does occurs in such areas, the development should be carefully integrated with the natural features on the site while the impact upon such sensitive natural areas is minimized. Similar to secondary environmental corridors, isolated natural resource areas also lend themselves to such uses as parks, drainageways, or stormwater detention or retention areas.

In addition to the environmental corridors and isolated natural resource areas, there are other environmentally significant lands in the Kewaskum area. Even though these areas do not currently qualify as environmental corridors or isolated natural resource areas, they are environmentally significant in the sense that they contain soils poorly suited to urban uses, wetland vegetation, steep slopes, and floodlands or provide buffer areas between incompatible land uses. In addition, this category includes open areas which are outside the abovementioned classified natural areas, but are currently owned and preserved by the Ice Age Park & Trail Foundation, Inc., or by the Wisconsin Department of Natural Resources for the Kettle Moraine State Forest—Northern Unit. Other open lands to be preserved are either adjacent to lands currently classified as environmental corridors or isolated natural resource areas or are small isolated areas of less than five acres, scattered throughout the planning area.

Such lands would occupy approximately 668 acres, or 4 percent of the entire planning area, under the recommended land use plan. It is recommended that careful consideration be given to preserving such areas in essentially natural, open space use whenever practicable. As natural vegetation develops on these undisturbed areas, such vegetated areas may eventually be reclassified as either environmental corridors or isolated natural resource areas.

Residential Land Uses

Under the recommended land use plan, new residential development is proposed to occur through the creation of new residential uses situated contiguous to, and extending outward from, existing residential developments. Those areas recommended for residential use, as shown on Map 29 and set forth in Table 29, total about 1,374 acres under the recommended land use plan. This figure represents approximately 9 percent of the total planning area, an increase of about 817 acres, or 147 percent, over the 1990 level of approximately 557 acres. The plan identifies areas recommended for suburban residential development, with lot sizes ranging from 1.5 to five acres. Such single-family residential developments are diffused throughout the planning area, generally located adjacent to existing developments of this type. The plan also identifies those areas recommended for low-density, single-family residential development, with lot sizes ranging from 20,000 square feet to 1.5 acres. Such single-family residential developments are also diffused throughout the planning area, generally where such developments were already platted, except for several new locations within the planned urban service areas.

The suburban-density and low-density residential areas lying outside the planned urban service area are composed of existing land subdivisions, including divisions created by certified survey maps, and represent areas which are not proposed to be served by public sanitary-sewer service during the life of the recommended land use plan. Partly because of the lack of these services, no additional urban residential developments at densities greater than 0.2 dwelling units per acre are recommended outside the urban service area. New urban residential development outside the urban service area should be encouraged only on existing vacant lots, provided the soils and size of each lot proposed for development are capable of properly accommodating an onsite sewage-disposal system and a private well.

The recommended land use plan also identifies those areas for more intense residential developments, such as medium-density, single-family residential developments with lot sizes less than 20,000 square-feet, two-family residential developments, and multi-family residential developments. Optimally, any new residential developments of these types are recommended to be located within the planned urban service area, where public water-supply, sanitary-sewer, and other urban services would be provided.

Commercial and Industrial Land Uses

Map 29 identifies commercial land uses that together approximate 136 acres, or 1 percent, of the total planning area under the recommended land use plan. As shown on the plan, all new commercial

uses would be located within the planned urban service area. No new commercial areas are recommended outside the urban service area.

Industrial uses would occupy about 146 acres, or 1 percent, of the total planning area under the recommended land use plan. As shown on this plan, all new industrial developments are proposed to be located within the planned urban service area. No new industrial areas are recommended outside this urban service area during the life of the plan.

Extractive and Landfill

No extractive or landfill sites are identified in the recommended land use plan. An existing 12-acre extractive site located north of the Village on the west side of USH 45 is planned to be reclaimed for future urban uses, as indicated on the land use plan. An approximately four-acre landfill site located east of Hickory Drive in the northeast corner of the Kewaskum planning area is currently inactive and would remain as open space.

Governmental and Institutional Land Uses

Areas recommended for governmental and institutional uses would total about 124 acres, or 1 percent, of the total planning area under the recommended plan. These uses include the continuation of already existing governmental and institutional uses outside the urban service area, as well as new developments of this type within the urban service area. The scattered institutional uses shown on the plan as outside the urban service area consist primarily of churches, cemeteries, and the Town of Kewaskum town hall. No additional land for governmental or institutional uses is identified outside the urban service area on the recommended land use plan because of the insignificant amount of additional land that is expected to be required for such uses during the life of the plan.

Park and Recreational Land Uses

The park and recreational uses shown on Map 29 are based, in part, upon recommendations contained in SEWRPC Planning Report No. 27, A Regional Park and Open Space Plan for Southeastern Wisconsin—2000, SEWRPC Community Assistance Planning Report No. 136, A Park and Open Space Plan for Washington County, and the Kettle Moraine State Forest—Northern Unit Master Plan produced by the Wisconsin Department of Natural Resources. Under the recommended plan, public as well as private intensive outdoor recreational areas would encompass approximately 303 acres, or 2 percent of the total planning area. This represents an increase of about 52 acres, or 21 percent, over the 1990 level of about 252 acres. In order to avoid double-counting, these acreages do not include those portions of the park sites that contain the above-described environmentally sensitive areas within the park boundaries. The plan shown on Map 29 calls for the expansion of a major park, Kettle Moraine State Forest—Northern Unit, discussed below; and the expansion of an existing community park, Kewaskum Kiwanis Community Park, and the development of three new neighborhood parks discussed in the next section.

Major Park: An approximately 2,820-acre portion of the Kettle Moraine State Forest—Northern Unit lies within the Kewaskum planning area. The existing State Forest is a major park that serves a multi-county area by providing such intensive outdoor recreation facilities as a swimming beach, camping areas, and areas for picnicking and other passive recreation activities. The park also encompasses areas of significant natural resource base-related amenities in primary environmental corridors for open space preservation purposes, including the portion that lies within the Kewaskum planning area. On the basis of the adopted master plan for the State Forest, the portion of this park within the planning area is recommended to be expanded by approximately 700 acres, which would include primary environmental corridors. The land use plan set forth here further recommends that approximately 150 additional acres west of the East Branch Milwaukee River and the adopted project boundary for the State Forest[4] be included, encompassing floodlands, wetlands, and steeply sloped areas mostly contained within a primary environmental corridor in the southeast one-quarter of Section 3 and the northeast one-quarter of Section 10, Township 12 North, Range 19 East. Accordingly, the plan recommends that the Wisconsin Department of Natural Resources consider expanding the adopted project boundary of the State Forest when the mas-

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[4]*Lands within the approved project boundary have been identified by the Wisconsin Natural Resources Board as appropriate additions to the adjacent State Forest and are intended to be acquired by the State for recreational or open space purposes. The landowners affected should be able to initiate desired action by offering to sell the land concerned to the State for a mutually acceptable price. If the State does not act within a reasonable amount of time, appropriate private land use of the subject property could proceed, consistent with the plan recommendations.*

ter plan for the Kettle Moraine State Forest—Northern Unit is updated.

Parkway: Linear primary environmental corridors located in urban or urbanizing areas in Southeastern Wisconsin that are held in public ownership are often termed "parkways" or "greenways." Parkways are generally located along a stream, ridge line, or other linear natural feature and are intended to provide aesthetic and natural resource continuity. Parkways often serve as ideal locations for recreational trail facilities. The Village has a unique opportunity to establish such an interconnecting parkway system with trail facilities along North, Knights, Edgewood, Kewaskum, and Kettle View Creeks and the Milwaukee River and its East Branch, as depicted on Map 31 and, later, on Map 33. In addition, the adopted Washington County park and open space plan recommends that the parkway along the Milwaukee River continue south of the Kettle Moraine State Forest—Northern Unit through the City of West Bend to the Washington-Ozaukee County line. The parkway would continue from that point along the River through Ozaukee and Milwaukee Counties to Lake Michigan, thereby providing opportunities for a variety of long trail-oriented activities while preserving significant natural features along the River.

Trails: Recreational and utilitarian trail facilities, such as bikeways[5] and hiking trails, are also proposed in the recommended plan. Maps 30 and 31 identify recommended bikeways and other proposed recreation trails, respectively, for the Kewaskum planning area. A more detailed recreation trail system plan for the Kewaskum planned urban service area is shown on Map 33.

Approximately 23 linear miles of bikeways are recommended in the planning area to serve recreational and utilitarian purposes by linking Village residents to both significant urban and natural features identified on Map 30. The Federal Clean Air Act of 1990 promotes the use of alternative modes of transportation such as bicycling, hiking, and mass transit to reduce single-occupancy automobile use, thereby reducing air pollutant emissions by motor vehicles. The promotion of bikeways as identified on Map 30 is one means of reducing this impact. The recommended bikeway system also includes approximately 10 miles of Washington County planned bicycle route. An in-depth study should be conducted to determine the precise location and type of bikeway facilities that should be provided in accordance with the plan, considering such pertinent factors as topographic constraints, stormwater-conveyance facilities, and minimum right-of-way requirements.

Map 31 also shows the planned locations of the Ice Age National Scenic Trail and other main recreation trails, including those trails in the Kettle Moraine State Forest, for the planning area. The 1,000-mile Ice Age National Scenic Trail is planned to follow the glacial moraines stretching from Door County in the northeast part of Wisconsin to and through the Kettle Moraine area in Southeastern Wisconsin. As shown on Map 31, about 8.5 miles of the Ice Age National Scenic Trail would traverse the Kewaskum area and near the planned urban service area, thus providing a valuable recreational amenity and opportunity for the Village residents. Approximately seven miles of trails currently exist within the planning area. Map 31 shows a tentative route for the remaining segment of the trail from its intersection with USH 45 to the existing access point in the State Forest, northeast of the intersection of CTH H and Oak Drive. It should be noted that the Ice Age Park & Trail Foundation, Inc., developed property west of the existing Sunburst Ski Area by establishing a trailhead near Badger Road and additional trail routes which further present a unique opportunity to also create cross-country ski trails on this property in coordination with the Sunburst Ski Area.

Map 31 also shows the main routes of a recommended local trail network that would traverse the Kewaskum planning area, ultimately connecting residential areas to key activity centers, including the Kettle Moraine State Forest and the Ice Age National Scenic Trial and the equestrian and

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[5]*"Bikeway" is a general term that includes any road, path, or way that may legally be used for bicycle travel. Types of bikeways include "bike paths," which are physically separated from motorized vehicles; "bike lanes," which are portions of roadways that are designated by striping, signing, and pavement markings for the exclusive or preferential use of bicycles; and "shared roadways," which are roadways that do not have a designated bicycle lane, but may legally be used for bicycle travel. A "Bike Route" is a bikeway designated with directional and informational markers, and may consist of a combination of bike paths, bike lanes, and shared roadways.*

snowmobile trail. A more detailed trail network system is shown on Map 33 for the Kewaskum planned urban service area, indicating not only the main trail routes but also the supplemental trail routes connecting planned residential areas to the main routes.

Scenic Drive: The plan recognizes the continued recreational use of the Kettle Moraine Scenic Drive traversing the Kewaskum area, as shown on Map 9 in Chapter III. This pleasure driving route connects the Kettle Moraine State Forest—Northern Unit in Fond du Lac, Sheboygan, and Washington Counties with the Kettle Moraine State Forest—Southern Unit in Jefferson, Walworth, and Waukesha Counties. The route totals about 75 miles in length within the Southeastern Wisconsin Region, including about 31 miles in Washington County and 4.5 miles in the Kewaskum planning area.

Prime Agricultural Lands

Prime agricultural lands are defined as parcels of 35 acres or larger that are covered by soils well suited for the production of food and fiber and occur in aggregates of 640 acres of farmland or conservancy lands. Prime agricultural lands are proposed to encompass approximately 4,003 acres, or 26 percent, of the total planning area under the recommended land use plan. This represents a decrease of about 851 acres, or 18 percent, from the 1990 level of about 4,854, owing to the planned conversion of these areas to urban land uses. As shown on Map 29, prime agricultural lands lying outside the planned urban service area are recommended to remain in agricultural use.

Other Agricultural and Open Lands

Nonprime agricultural lands and other open lands would encompass approximately 2,549 acres, or 16 percent, of the total planning area under the recommended land use plan. This represents a decrease of about 200 acres, or 7 percent, from the 1990 level of about 2,749 acres due to the planned conversion of such lands to urban use. These areas, shown in white on Map 29, are generally intended for agricultural use, but are either covered by less productive agricultural soils that do not meet the criteria established for prime farmland or are parcels smaller than 35 acres. If converted to residential use, development in these areas should exhibit an overall density of not more than one dwelling unit per five acres. At this density, suitable areas, with good soils and level topography, should exist on each parcel for proper siting of a private sewage-disposal system, building pad, and driveways.

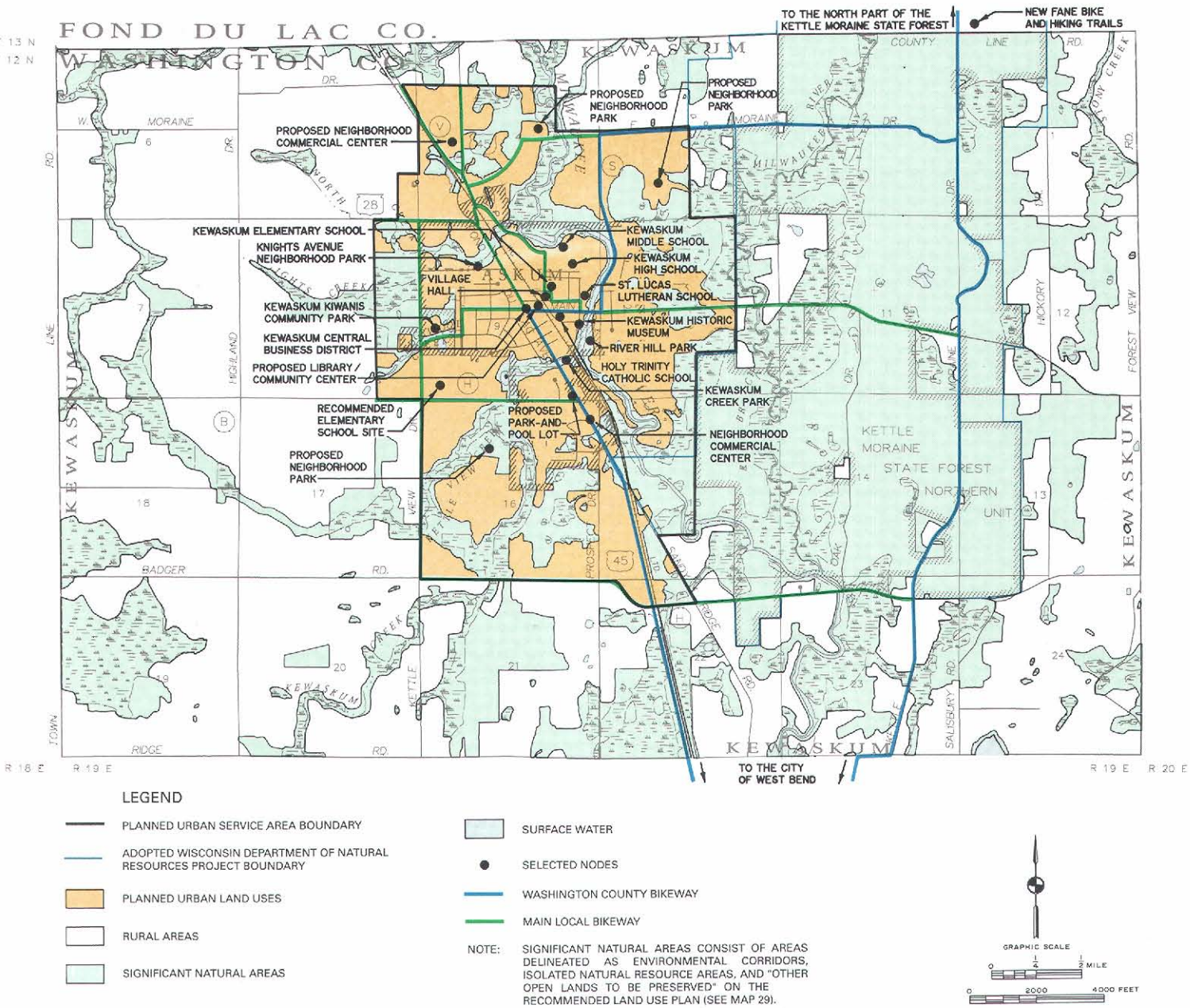
THE RECOMMENDED LAND USE AND STREET SYSTEM PLANS FOR THE VILLAGE OF KEWASKUM URBAN SERVICE AREA

The recommended land use and street system plans for the Kewaskum planned urban service area are shown on Map 32. Table 30 lists the number of acres and the percentage of land allocated to each land use category in the planned urban service area and compares this information to the 1990 land use pattern in the same geographic areas. Figure 31 provides a graphic comparison between the 1990 land uses and the proposed land uses for both the Village of Kewaskum 2010 urban service area and the extended planned urban service shown on Map 32. The Village Plan Commission determined, after careful consideration, that the land use and street system plans for the Kewaskum planned urban service area should anticipate the full development of that area. This results in the designation of a larger area for new urban growth than necessitated by the population and employment forecasts presented in Chapter II and the companion land use forecasts presented in Chapter VII. As noted earlier, such an approach provides flexibility for the operation of the urban land market without significantly affecting the substance of the plan and provides a basis for guiding future urban development in fringe areas.

In addition to showing the general land use pattern for the planned urban service area on Map 29, the recommended land use plan shown on Map 32 also depicts relatively precise urban development patterns. These patterns include a street system and attendant lot and block layouts for those areas recommended for new urban development. This more precise plan is intended to foster sound development of the traffic-circulation, stormwater drainage, sanitary-sewerage, and water-supply systems. The precise community development patterns were based upon careful consideration of such factors as soil suitability, land slopes, surface drainage patterns, flood hazards, woodland and wetland cover, existing and proposed land uses, and real property boundaries. To ensure protection and preservation of the environmentally sensitive areas identified on the plan, such areas should be purchased by, or dedicated to, the local municipality or protected by private deed restrictions or conservation easements.

Map 30

RECOMMENDED BIKEWAYS FOR THE KEWASKUM PLANNING AREA

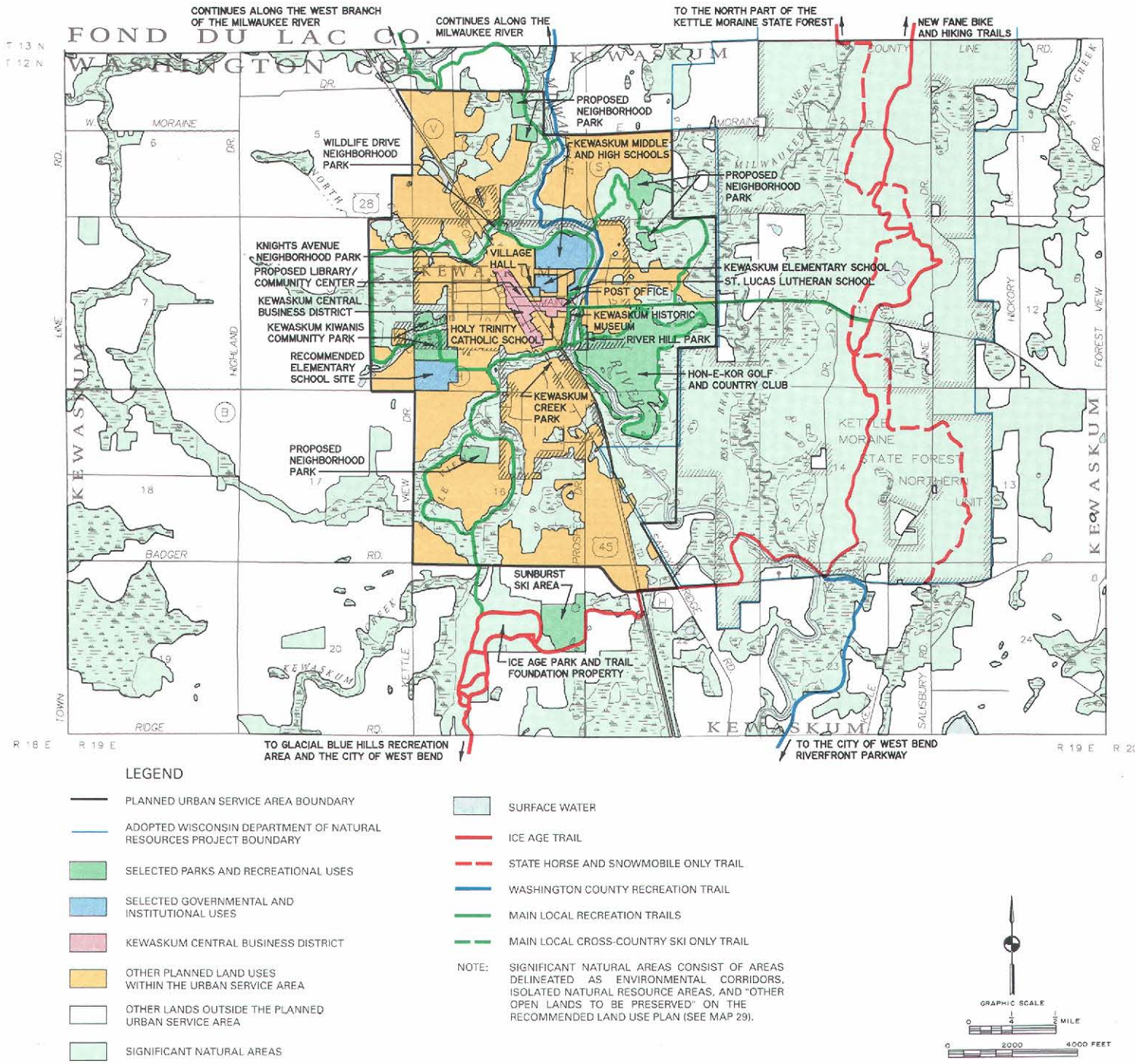


Source: SEWRPC.

The recommendations of this plan, while quite detailed, must, nevertheless, also be considered flexible. The plan is intended to be used as a point of departure for evaluating development proposals of private and public agencies as such proposals arise. It should not be presumed that developers cannot present development plans harmonious with sound community development objectives and standards nor that any development plans that are privately advanced and at variance in some respect with the adopted land use plan are necessarily unacceptable. Local planning officials should remain receptive to proposed plan changes that can be shown to be better than the adopted plan while remaining compatible with the objectives for the development of the community as a whole.

Map 31

RECOMMENDED MAIN RECREATIONAL TRAILS FOR THE KEWASKUM PLANNING AREA



Source: SEWRPC.

Environmentally Significant Areas

Existing woodlands, wetlands, and surface waters are proposed to be incorporated into environmental corridors and isolated natural resource areas. New urban development should be effectively related to such corridors and other environmentally significant areas in order to utilize the natural beauty of these areas as a humanizing feature for the residents of the Kewaskum area.

Primary Environmental Corridors: In 1990, primary environmental corridors occupied approximately 601 acres, or 24 percent, of the proposed Village urban service area, and about 729 acres, or 25 per-

Table 30

SUMMARY OF EXISTING 1990 AND RECOMMENDED LAND USES IN THE KEWASKUM URBAN SERVICE AREA

Land Use Category[a]	Village of Kewaskum 2010 Urban Service Area[b]								Planned Urban Service Area 2010 and Beyond[c]					
	1990		Recommended 2010 Land Use Requirements		Full Development Conditions[d]		Difference between Recommended 2010 Land Use Requirements and Full Development Conditions		1990		Full Development Conditions[d]		Planned Changes: 1990 to Full Development	
	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
Urban														
Residential														
Single-Family														
Suburban-Density (1.5- to 4.9-acre lots)	28.3	1.1	0.0	--	8.4	0.3	8.4	--	32.3	1.1	11.1	0.4	-21.2	-65.6
Low-Density (20,000- to 65,339 square foot lots)	53.5	2.2	61.0	2.4	96.5	3.8	35.5	58.2	53.5	1.8	97.2	3.4	43.7	81.7
Medium-Density (7,200- to 19,999-square foot lots)	195.5	7.8	327.3	13.1	678.4	27.1	351.1	107.3	195.5	6.8	842.3	29.1	646.8	330.8
Single-Family Subtotal	277.3	11.1	388.3	15.5	783.3	31.2	395.0	101.7	281.3	9.7	950.6	32.9	669.3	237.9
Two-Family														
Medium-High-Density (6.1 to 7.3 dwelling units per net residential acre)	6.0	0.2	20.7	0.8	71.5	2.9	50.8	245.4	6.0	0.2	82.7	2.9	76.7	1,278.3
Multi-Family														
High-Density (7.4 to 21.8 dwelling units per net residential acre)	17.1	0.7	51.0	2.0	65.2	2.6	14.2	27.8	17.1	0.6	72.0	2.4	54.9	321.1
Residential Subtotal	300.4	12.0	460.0	18.3	920.0	36.7	460.0	100.0	304.4	10.5	1,105.3	38.2	800.9	263.1
Commercial	47.3	1.9	41.9	1.7	122.4	4.9	80.5	192.1	47.3	1.6	135.6	4.7	88.3	186.7
Industrial	43.3	1.7	141.3	5.6	132.5	5.3	-8.8	-6.2	43.3	1.5	133.2	4.6	89.9	207.6
Transportation and Utilities[e]	39.9	1.6	40.7	1.6	40.7	1.6	0.0	--	40.8	1.4	41.6	1.4	0.8	2.0
Governmental and Institutional	68.3	2.7	86.9	3.5	98.8	3.9	11.9	13.7	68.3	2.4	98.8	3.4	30.5	44.7
Recreational[f]	114.0	4.6	120.0	4.8	245.0[g]	9.8	125.0	104.2	114.0	4.0	254.0[g]	8.9	140.0	122.8
Urban Subtotal	613.2	24.5	890.8	35.5	1,559.4	62.2	668.6	75.1	618.1	21.4	1,768.5	61.2	1,150.4	186.1
Nonurban														
Primary Environmental Corridor[h]	601.0	24.0	561.5	22.4	561.5	22.4	0.0	--	728.9	25.2	706.0	24.4	-22.9	-3.1
Secondary Environmental Corridor[h]	133.9	5.3	124.4	5.0	124.4	5.0	0.0	--	133.9	4.6	124.1	4.3	-9.8	-7.3
Isolated Natural Resource Areas[h]	13.1	0.5	18.2	0.7	18.2	0.7	0.0	--	13.1	0.5	18.2	0.6	5.1	38.9
Agricultural and Other Open Lands	1,145.2	45.7	911.6	36.4	243.0[i]	9.7	-668.6	-73.3	1,397.1	48.3	274.3[i]	9.5	-1,122.8	80.4
Nonurban Subtotal	1,892.4	75.5	1,615.7	64.5	947.1	37.8	-668.6	-41.4	2,273.1	78.6	1,122.6	38.8	-1,150.5	-50.6
Total	2,506.5	100.0	2,506.5	100.0	2,506.5	100.0	--	--	2,891.1	100.0	2,891.1	100.0	--	--

[a] *Street rights-of-way and off-street parking areas are included in the associated land use category.*

[b] *The Village of Kewaskum 2010 urban service area shown on Map 32 reflects the adopted 2010 sanitary sewer service area for the Village of Kewaskum.*

[c] *This area is the larger planned urban service area shown on Map 32 that extends beyond the Village of Kewaskum 2010 urban service area.*

[d] *Assumes full development of the defined urban service areas envisioned under the recommended land use plan, as shown on Map 32.*

[e] *Includes only the railroad right-of-way and utility properties.*

[f] *Includes only areas for intensive outdoor recreational activities.*

[g] *Includes approximately 134 acres of existing 1990 privately-owned recreational lands, including the Hon-E-Kor Golf and Country Club and Holy Trinity Catholic Church recreational facilities.*

[h] *Includes associated surface water areas.*

[i] *This total represents the areas identified as "Other Open Lands to be Preserved" and small surface-water areas not encompassed in delineated environmental corridors or isolated natural resource areas in the recommended land use plan.*

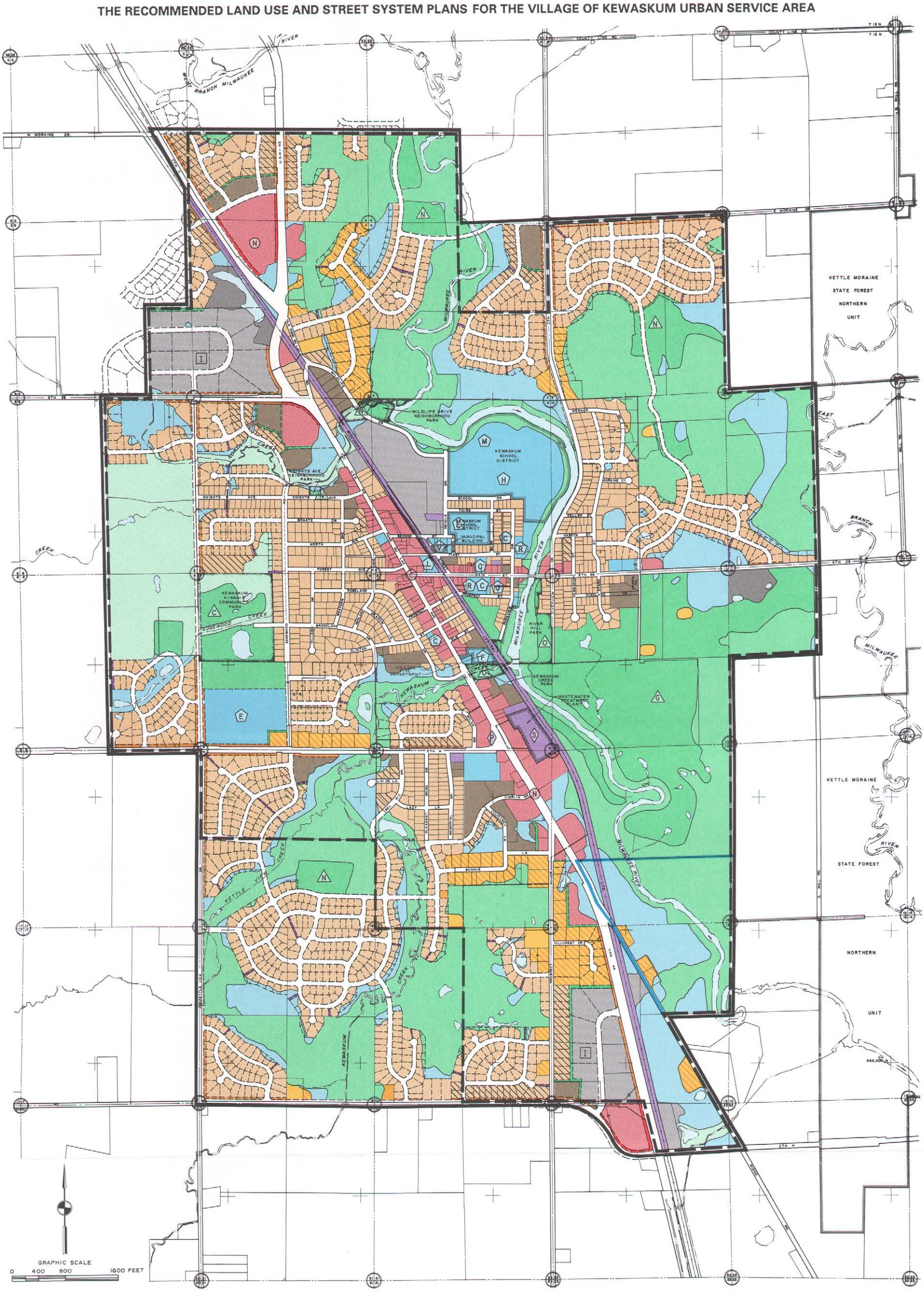
Source: SEWRPC.

cent, of the total planned urban service area. Table 30 indicates that under the recommended plan these corridors would occupy about 562 acres, or 22 percent of the Village 2010 urban service area, and about 706 acres, or 24 percent, of the total planned urban service area. The decrease of corridor within the planned urban service area, as mentioned earlier, is due primarily to committed development. The environmental corridors are located throughout the urban service area, along the Milwaukee River and its tributaries.

The remaining primary environmental corridors should, to the maximum extent practicable, be preserved in essentially natural, open uses for resource preservation and limited recreational purposes. Accordingly, it is recommended that sanitary sewers not be extended into such corridors to accommodate urban development. However, the plan recognizes that, in certain cases, the objective of preserving corridor lands may directly conflict with legitimate community development needs, such as the needed crossing of the corridors by streets

Map 32

THE RECOMMENDED LAND USE AND STREET SYSTEM PLANS FOR THE VILLAGE OF KEWASKUM URBAN SERVICE AREA



LEGEND

- PLANNED URBAN SERVICE AREA BOUNDARY
- VILLAGE OF KEWASKUM PLANNED URBAN SERVICE AREA BOUNDARY: 2010
- ADOPTED WISCONSIN DEPARTMENT OF NATURAL RESOURCES PROJECT BOUNDARY

SINGLE-FAMILY RESIDENTIAL DEVELOPMENT

- SUBURBAN-DENSITY (1.5- TO 4.9-ACRE LOTS)
- LOW-DENSITY (20,000- TO 65,339-SQUARE-FOOT LOTS)
- MEDIUM-DENSITY (7,200- TO 19,999-SQUARE-FOOT LOTS)

TWO-FAMILY RESIDENTIAL DEVELOPMENT

- MEDIUM-HIGH-DENSITY (6.1 TO 7.3 DWELLING UNITS PER NET RESIDENTIAL ACRE)

MULTI-FAMILY RESIDENTIAL DEVELOPMENT

- HIGH-DENSITY (7.4 TO 21.8 DWELLING UNITS PER NET RESIDENTIAL ACRE)

OTHER LAND USES

COMMERCIAL DEVELOPMENT
- N NEIGHBORHOOD COMMERCIAL CENTER
- C COMMUNITY CENTRAL BUSINESS DISTRICT

INDUSTRIAL DEVELOPMENT
- I INDUSTRIAL PARK

TRANSPORTATION AND UTILITIES
- S SEWAGE TREATMENT PLANT
- P PARK-AND-POOL LOT

GOVERNMENTAL AND INSTITUTIONAL
- V VILLAGE HALL AND POLICE DEPARTMENT
- L LIBRARY/COMMUNITY CENTER
- F FIRE STATION
- O POST OFFICE
- E PUBLIC ELEMENTARY SCHOOL
- M PUBLIC MIDDLE SCHOOL
- H PUBLIC HIGH SCHOOL
- R PRIVATE SCHOOL
- C CHURCH

PARKS AND RECREATION
- C COMMUNITY PARK
- N NEIGHBORHOOD PARK
- O OTHER PUBLIC PARK AND RECREATION SITES
- G GOLF COURSE

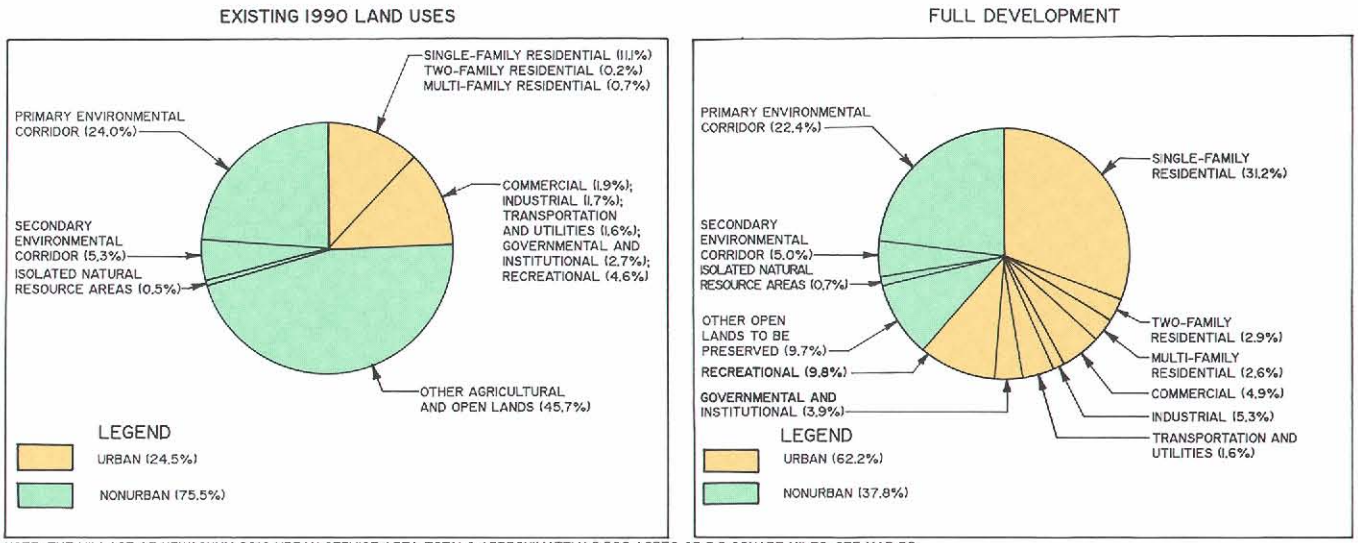
- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREAS
- OTHER OPEN LANDS TO BE PRESERVED
- SURFACE WATER
- EXISTING PROPERTY LINE
- EXISTING STREET RIGHT-OF-WAY LINES
- PROPOSED PROPERTY LINE
- PROPOSED STREET RIGHT-OF-WAY LINES
- PROPOSED NO-ACCESS EASEMENT
- PROPOSED LANDSCAPE BUFFER STRIP
- PROPOSED LANDSCAPE BUFFER STRIP AND NO-ACCESS EASEMENT
- PROPOSED PUBLIC PEDESTRIAN/RECREATION TRAIL ACCESS

Source: SEWRPC.

Figure 31

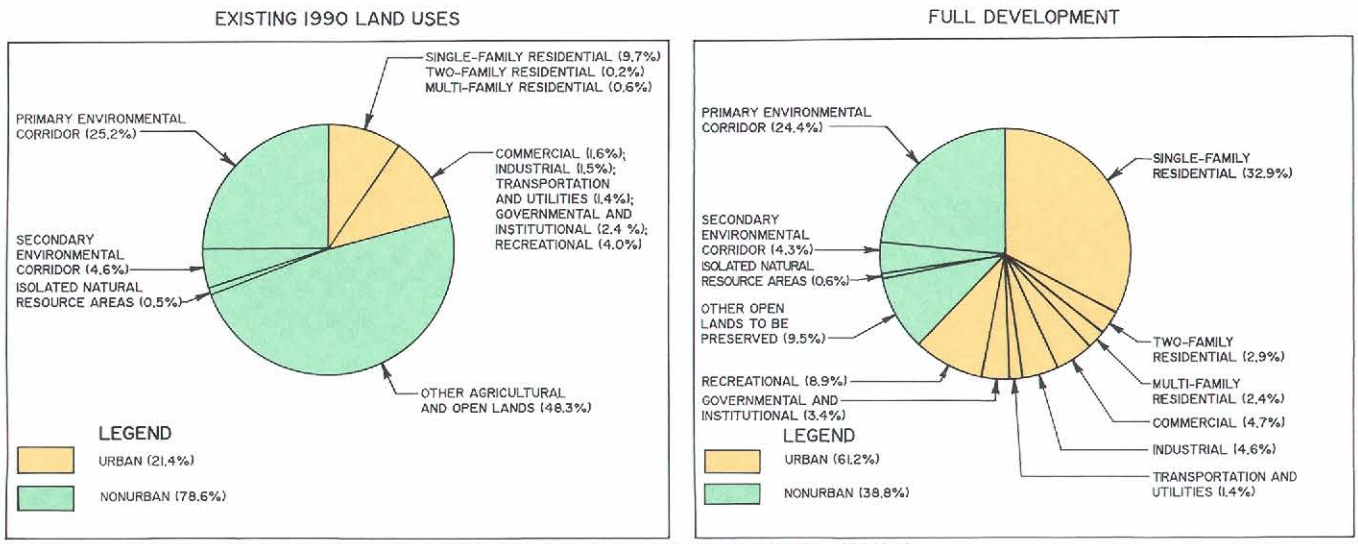
COMPARISON OF EXISTING 1990 AND RECOMMENDED LAND USES IN THE KEWASKUM URBAN SERVICE AREA

A. VILLAGE OF KEWASKUM 2010 URBAN SERVICE AREA



NOTE: THE VILLAGE OF KEWASKUM 2010 URBAN SERVICE AREA TOTALS APPROXIMATELY 2,506 ACRES OR 3.9 SQUARE MILES. SEE MAP 32.

B. TOTAL PLANNED URBAN SERVICE AREA



NOTE: THE ENTIRE KEWASKUM PLANNED URBAN SERVICE AREA TOTALS APPROXIMATELY 2,891 ACRES OR 4.5 SQUARE MILES. SEE MAP 32.

Source: SEWRPC.

and utilities. When such conflicts occur, the advantages and disadvantages of disturbing corridor lands must be carefully considered and, if development within the corridor occurs, such development should be carefully planned and executed to minimize damage to the corridor resources.

The plan also recognizes that certain land uses requiring sanitary-sewer service could be properly located in the corridors, including park and outdoor recreation facilities and certain institutional uses. In some cases, very-low-density residential development of no more than 0.2 dwelling units per net acre, equivalent to one dwelling unit per five acres, compatible with the preservation of the corridors, may also be permitted to occupy corridor lands; it may sometimes be desirable to extend sewers into the corridors to serve such uses. Figure 32 illustrates three different design options under which environmentally sensitive lands could be protected

while accommodating limited development. The clustered residential developments, as shown in Figure 32, should be encouraged over the use of the more conventional land subdivision. Clustering of housing units provides greater flexibility in residential development design by allowing lot sizes smaller than those normally required by the basic zoning district, thereby preserving a larger undisturbed area of open space and providing greater flexibility to situate housing units away from environmentally sensitive features. Open space in the cluster development provides a common area for certain passive recreational uses, such as hiking and nature study.

Secondary Environmental Corridors: The secondary environmental corridors shown on the recommended land use plan occupy about 124 acres, or about 5 and 4 percent, respectively, for both the Village 2010 urban service area and the total planned urban service area. This type of corridor is generally associated with intermittent watercourses, such as North, Knights, and Edgewood Creeks, and contains large areas of wetlands and woodlands, as shown on the recommended plan. It is recommended that the secondary environmental corridors be maintained, to the maximum extent practicable, for such public or private uses as parks, parkways, drainageways, or stormwater detention or retention.

Isolated Natural Resource Areas: Isolated natural resource areas are small areas with important natural resource values but are separated geographically from environmental corridors. The two isolated natural resource areas in the planned urban service area are wetland and woodland tracts at least 200 feet wide and five acres in area. These areas, under the recommended plan, would occupy about 18 acres, or 1 percent, within both the future Village urban service area and the total planned urban service area. It is recommended that such areas be preserved in essentially natural, open uses whenever possible. In this respect, isolated natural resource areas lend themselves to use for such private or public purposes as parks, drainageways, or stormwater detention or retention areas.

Other Open Lands to Be Preserved: The plan also recommends other small areas containing important natural resource values be preserved. Even though these areas do not currently qualify as part of an environmental corridor or isolated natural resource area, they are environmentally significant in the sense that they contain poor soils, wetland vegetation, steep slopes, or floodlands or provide buffering between incompatible land uses and areas for detention or retention ponds. These areas either lie adjacent to lands classified as environmental corridors or isolated natural resource areas or are small, isolated areas less than five acres in size. Under the recommended land use plan, such lands would occupy about 243 acres, or 10 percent, of the Village 2010 urban service area, and about 274 acres, or 10 percent, of the total planned urban service area. It is recommended that careful consideration be given to preserving such areas, similar to isolated natural resource areas, in essentially natural, open use whenever practicable. As noted earlier, these open lands may eventually be converted to, and reclassified as, either environmental corridors or isolated natural resource areas as natural vegetation develops on these areas during the life of the plan.

Residential Land Uses

Under the recommended plan, new residential development is proposed to occur both through the infilling of vacant platted residential lots and through the creation of new residential areas contiguous to, and extending outward from, existing residential development. Map 32 shows a recommended street and lot layout for new residential areas within the planned urban service area. Table 30 indicates that areas designated for residential use would total approximately 920 acres, or 37 percent, of the Village of Kewaskum 2010 urban service area and about 1,105 acres, or 38 percent, of the entire Kewaskum planned urban service area, under the recommended plan.

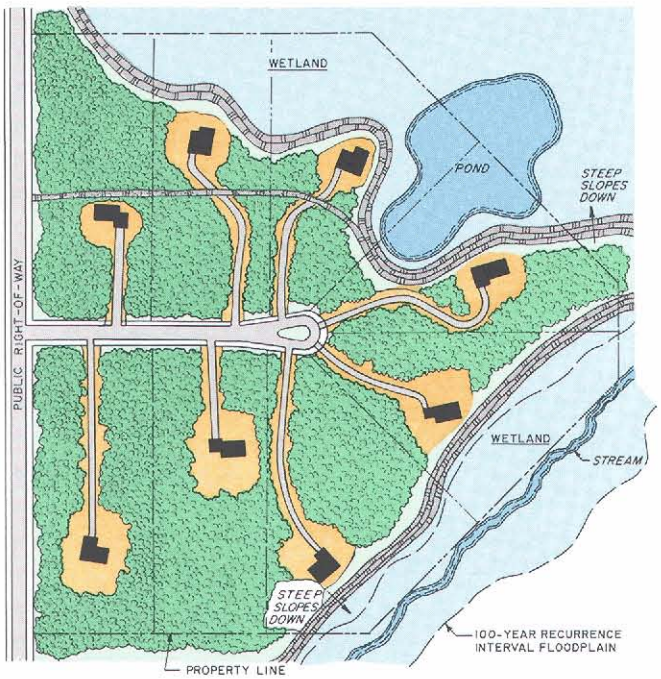
The recommended plan for the Kewaskum urban service area identifies five categories of residential land use based upon the residential density standards advanced in Chapter VI. Housing types in three of the five classifications, suburban-, low-, and medium-density, would be single-family housing units. The medium-high-density classification would be two-family housing units and the high-density residential classification would consist primarily of multi-family housing units with three or more dwelling units.

If residential development at urban densities is proposed on parcels containing environmentally sensitive lands outside primary environmental corridors, then the recommended plan encourages cluster development over conventional land subdivision development. As shown in Figure 33, clustered development can be used to accommodate both attached and detached dwelling units on smaller

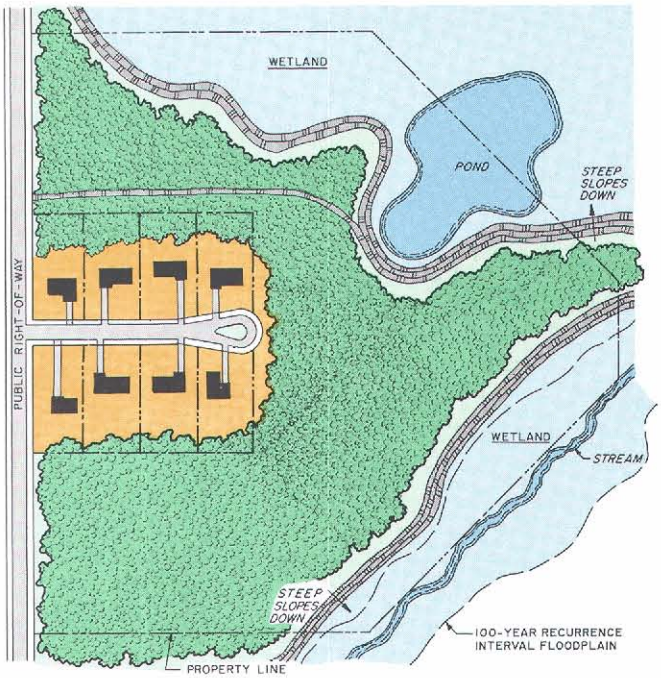
Figure 32

ALTERNATIVE RESIDENTIAL DEVELOPMENT DESIGNS COMPATIBLE WITH PRIMARY ENVIRONMENTAL CORRIDORS

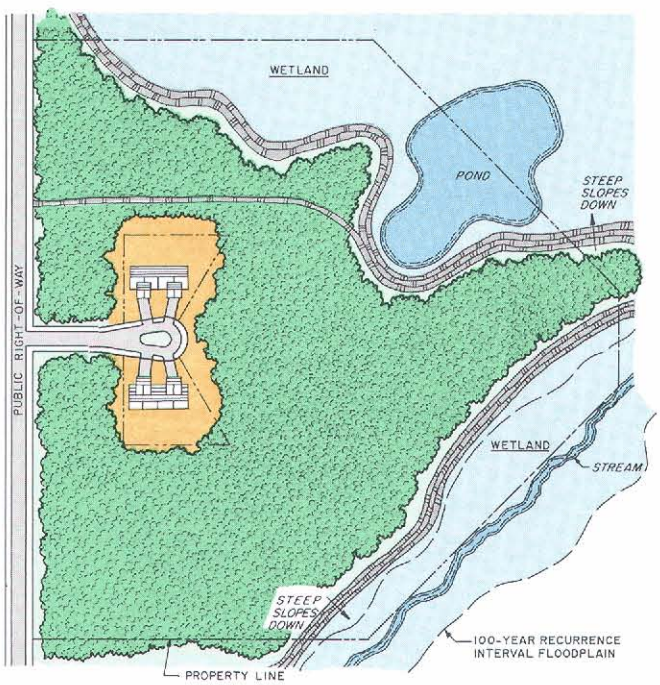
A. CONVENTIONAL FIVE-ACRE OR GREATER LOT DESIGN



B. CLUSTERED ONE-ACRE LOT DESIGN



C. CLUSTERED CONDOMINIUM DEVELOPMENT DESIGN



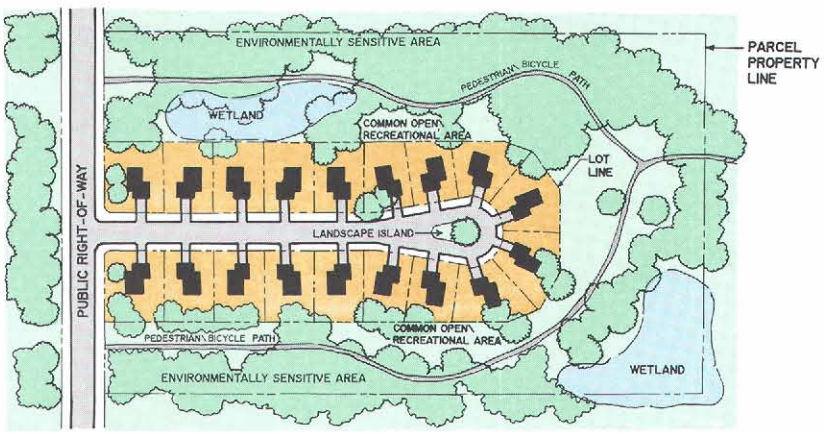
NOTE: THE ALTERNATIVE DESIGNS ARE BASED ON DENSITIES EQUIVALENT TO AT LEAST ONE DWELLING UNIT PER NET FIVE-ACRE AREA

Source: SEWRPC.

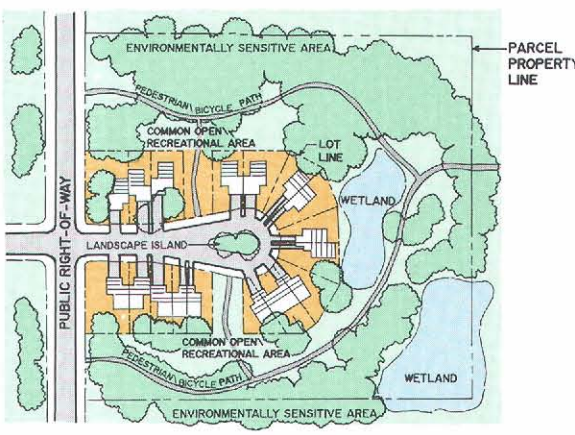
Figure 33

ALTERNATIVE RESIDENTIAL DEVELOPMENT DESIGNS
COMPATIBLE WITH ENVIRONMENTALLY SENSITIVE AREAS

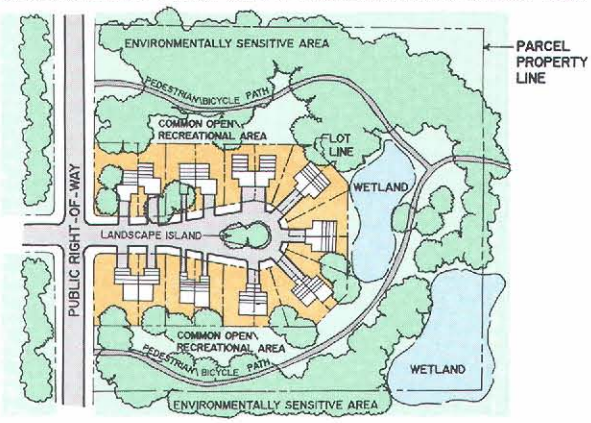
A. CLUSTERED SINGLE-FAMILY RESIDENTIAL DEVELOPMENT



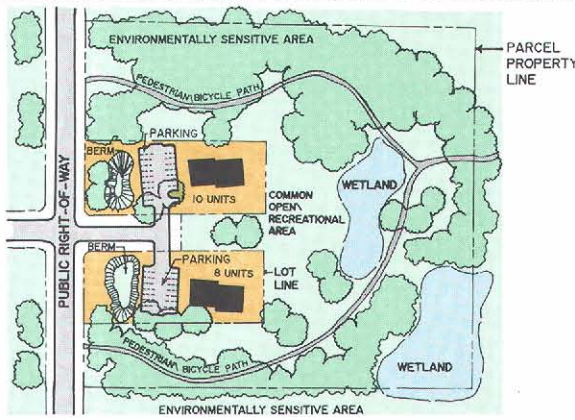
C. CLUSTERED TOWNHOUSE RESIDENTIAL DEVELOPMENT



B. CLUSTERED TWO-FAMILY RESIDENTIAL DEVELOPMENT



D. CLUSTERED MULTI-FAMILY RESIDENTIAL DEVELOPMENT



Source: SEWRPC.

lots than otherwise required under the basic zoning district, thereby preserving larger undisturbed areas for the preservation of the environmentally sensitive areas. In each illustration in Figure 33, the overall density of the development, including the open space, would not be permitted to exceed the maximum residential development density determined by the zoning district in which the development is located.

Suburban-Density, Single-Family Residential Development: Suburban-density residential developments would utilize lot sizes ranging from 1.5 to five acres. Under the recommended plan, such single-family residential land uses would total about eight acres, or less than 1 percent, of the Village of Kewaskum 2010 urban service area, and about 11 acres, or less than 1 percent, of the entire planned urban service area. The areas designated for such development already exist and are not currently served by public water or sanitary sewer. No new lots in this density classification are recommended to be created because of the high cost of providing public water-supply and sanitary-sewer services to such lots.

Low-Density, Single-Family Residential Development: This classification of single-family residential development would have lot sizes ranging from 20,000 square feet to 1.5 acres. The areas proposed for low-density residential development under the

recommended plan would total about 97 acres, or 4 percent, of the Village of Kewaskum 2010 urban service area, and about 97 acres, or about 3 percent, of the total planned urban service area. New areas of this residential classification are recommended adjacent to such existing land uses throughout the planned urban service area.

Medium-Density, Single-Family Residential Development: Under the recommended plan, new medium-density residential development would be accommodated on lot sizes ranging primarily from 7,200 to 20,000 square feet. This development is proposed throughout the planned urban service area and proposed to be served by a full range of public facilities, including public sewer and water, engineered stormwater drainage, street lighting, and sidewalks. This classification of single-family residential development would total about 678 acres, or 27 percent, of the Village of Kewaskum 2010 urban service area, and about 842 acres, or 29 percent, of the total planned urban service area.

Two-Family Residential Development: The areas proposed for medium-high- density, two-family residential development would total about 72 acres, or 3 percent, of the Village 2010 urban service area, and total about 83 acres, or 3 percent, of the entire planned urban service area under the recommended plan. Densities in this classification would range from 6.1 to 7.3 dwelling units per net acre. These areas are proposed to be located generally near commercial and multi-family residential developments in the planned urban service area.

Multi-Family Residential Development: The areas proposed for high-density, multi-family residential development under the recommended plan would have densities ranging from 7.4 to 21.8 dwelling units per net acre. The plan recommends that new residential development in this classification exhibit densities at the lower end of the range, with approximately 10 to 14 dwelling units per net acre, similar to the overall density of existing multi-family residential developments. The areas proposed for high-density, multi-family residential development under the recommended plan would total about 65 acres, or 3 percent, of the Village of Kewaskum 2010 urban service area, and about 72 acres, or 2 percent, of the total planned urban service area. Such developments are proposed to be served by public sanitary sewer and water supply and to be located throughout the planned urban service area near and along arterial streets and highways. These areas are also recommended to be located in convenient general proximity to commercial retail and service centers.

Commercial Land Uses

The recommended land use plan depicts various areas devoted to commercial land uses. Under the plan, commercial land uses would encompass an area of about 122 acres, or 5 percent, of the Village 2010 urban service area, and about 136 acres, or 5 percent, of the total planned urban service area. These areas represent extensions of already existing uses in addition to new areas that would serve commercial retail sales and service land use needs to the year 2010 and beyond. Categories of commercial development shown on the plan map include two neighborhood commercial centers and the community CBD. Also, a business conducting wholesale or retail sales and warehousing or a highway-oriented commercial development with drive-in establishments is recommended on an approximately nine-acre area in the far southern portion of the planned urban service area, northwest of the intersection of CTH H and USH 45.

Neighborhood Commercial Centers: Neighborhood commercial centers provide a concentration of retail and service establishments oriented to meeting day-to-day retail and service needs of nearby residents. Typical uses in such centers may include convenience or small grocery stores, service stations, restaurants, pharmacies, laundry and dry cleaner outlets, barber or beautician shops, and other small retail and service establishments. Standards set forth in Chapter VI indicate that neighborhood retail and service centers should be five to 15 acres in area and that the service radius of such centers should be about one and one-quarter miles in medium-density residential areas. New neighborhood commercial centers should generally be located on the edge of a neighborhood, along an arterial street, or at intersecting arterial streets. Such centers typically serve at least two neighborhoods.

The plan identifies two neighborhood commercial centers within the planned urban service area based on the subneighborhoods delineated on Map 28 and the land use patterns proposed under the recommended land use plan. One of the centers is recommended to continue to exist in the southern portion of the planned urban service area, near the intersection of USH 45 with CTH H and Timblin Drive. Another new neighborhood commercial center is recommended near the intersection of USH 45

and CTH V, to serve the northern portion of the planned urban service area as urban development proceeds in this general direction.

Community Central Business District: Map 28 identifies the Kewaskum Central Business District as a special planning district proposed to continue to serve as a major focal point for commercial activities in the Kewaskum area, supported by other major attractions in the area, including the Kettle Moraine State Forest. In addition to providing services similar to the neighborhood commercial centers' services, this community-oriented district would provide such shopper goods as clothing, furniture, and appliances. It could also foster the identity of the Village, an identity due, in part, to the historic character of the buildings in the area.

The Village has been working actively to maintain and improve the vitality of the CBD by burying overhead utility lines and improving building facades. Additional amenities such as decorative lighting, benches, street trees, brick pavements, and related street furniture could be eventually incorporated to create an attractive streetscape. The plan recommends that the Village continue to maintain and improve the vitality of the CBD in accord with the historic preservation and urban design guidelines set forth in Chapter VI and in the urban design section of this chapter. The opportunities for promoting the historic features in the District could be further enhanced by exploiting the natural scenic beauty of the area by connecting a potential trail route through the CBD with a planned recreational trail network along the Milwaukee River and its tributaries, as discussed later.

Industrial Land Uses

The plan envisions that the areas devoted to industrial land uses would occupy about 133 acres, or 5 percent, of both the Village 2010 urban service area and the total planned urban service area. Most of the increase in industrial lands would take place through the expansion of existing industrial lands and the creation of two industrial parks, one northwest and one southeast of the Village, as identified on Map 32. Both industrial parks are proposed near major arterial street intersections; the intersection of USH 45 with STH 28 to the north and CTH H to the south of the Village.

Governmental and Institutional Land Uses

As shown on Map 32, governmental and institutional land uses under recommended plan would occupy about 99 acres, or about 4 and 3 percent, respectively, of the Village of Kewaskum 2010 urban service area and the entire planned urban service area. These uses include the continuation of already existing governmental and institutional uses, as well as areas for expanding the Municipal Building site and developing a new public library and/or community center and a new elementary school.

Village Hall and Library/Community Center: The plan incorporates the Village's future plans to expand the existing Municipal Building site. The Village Plan Commission determined that the site should be expanded to the north and east, as reflected on Map 32, in order to provide additional parking. As noted in Chapter VII, the Village is also contemplating the relocation of the library and/or community room from the current Municipal Building to the old Sentry Food Store site purchased by the Village. This would free space for future expansion needed within the building. The plan shows the tentative location of a new public library and/or community center on the old Sentry store site, northwest of the intersection of Main Street (STH 28) and Railroad Street, to accommodate a larger library and/or community meeting place to satisfy the present and future needs of community residents. Because of the various factors that may affect the spatial requirements for both the library/community center and the municipal operations mentioned above, it is recommended that the Village retain a consultant to study the future spatial needs and desirable arrangement of the Village governmental activities mentioned above prior to any expansion activities. Except for the library and/or community room, the Village anticipates that the present governmental operations will continue at the present location to the year 2010.

Fire-Protection Facilities: The Village of Kewaskum Fire Department, housed at 1106 Fond du Lac Avenue (USH 45), is a 45-member volunteer force that serves the Kewaskum area and is the parent organization of the Volunteer Rescue Squad that provides emergency rescue services. The Department has reciprocal service agreements with the neighboring fire departments whereby additional personnel and equipment can be called if supplemental fire-fighting capability is needed. No new fire stations are recommended in the plan since most of the future intensive urban development recommended to take place within the urban service area would lie within the 1.5-mile optimum service radius of the existing station, as recommended by the Insurance Services Office.

Educational Facilities: As indicated in Chapter VII, if the future school-age population reaches the high end of the alternative forecasts considered for the Kewaskum planning area by the year 2010, there may be a need for additional educational and attendant recreational facilities at all grade levels within the planning area. In addition, with the full development of the planned urban service area, the existing middle and high school capacities would probably need to be expanded and a new elementary school would likely be needed, given the school capacity standards in Table 20 of Chapter VI. Accordingly, Map 29 and 32 show the tentative location of a potential public elementary school within the Kewaskum planned urban service area south of the Kewaskum Kiwanis Community Park, where the recreational facilities could be shared by students and neighborhood residents.

The foregoing recommendation is not intended to indicate that such a facility will be warranted by the year 2010. This information is provided to allow the School District an opportunity to reserve land for a future school that may be needed beyond the year 2010 with full development of the entire planned urban service area, unless the school-age population in the large School District warrants addressing such a need before then. As also noted earlier, the Kewaskum School District was conducting a school facility study in 1996 to consider options that go beyond the recent remodeling and renovating of the interior of both the Kewaskum High School and Middle School. The options under consideration include remodeling the existing Kewaskum Elementary School, replacing that school on the present site, or relocating the school to the Middle School site. If any additional lands are needed within the planned urban service area as a result of this District study and any other future school facility need studies undertaken by the School District, the recommended land use and street system plans presented here should be properly amended.

Park and Recreational Land Uses

Specific recommended park and recreational uses, including potential parkways or greenways, have been described in the preceding sections of this chapter and are based, in part, upon areawide plans. Under the recommended plan, public and private intensive outdoor recreational uses would encompass a total of about 245 acres, or 10 percent, of the Village 2010 urban service area, and about 254 acres, or 9 percent, of the entire planned urban service area. These acreages do not include those portions of the park sites that contain environmentally sensitive areas within the park boundaries; those are discussed under separate environmental land use categories.

Existing and proposed parks within the planned urban service area, including the expansion of Kewaskum Kiwanis Community Park and part of the expansion of the Kettle Moraine State Forest—Northern Unit, discussed earlier, are shown on Map 32. In addition, the plan recommends three new neighborhoods parks within the planned urban service area, as discussed below. The plan also envisions the continued use of the Kettle Moraine Scenic Drive as well as certain private recreational facilities in the Kewaskum area, including the Hon-E-Kor Golf Club and Country Club, the Sunburst Ski Hill, and the Holy Trinity Catholic School property.

Neighborhood Parks: Neighborhood parks by definition range in size from five to 24 acres, have a service radius of 0.5 to one mile, and generally provide facilities for such children's outdoor recreation activities as playground and playfield activities, ice-skating, and basketball and other court games. Community or regional parks with these types of facilities can serve as neighborhood parks, provided they are within safe walking and bicycling distance without the need to cross heavily traveled arterial streets. School outdoor recreations sites, while not generally perceived as parks, provide areas for outdoor recreational pursuits in urban areas. Public school outdoor recreation sites are, therefore, considered while determining park locations.

Three new neighborhood parks are shown on the recommended plan to serve the residents of Moraine View, River Hill, and Kewaskum Creek subneighborhoods, respectively. The plan also recognizes the continued use of two small neighborhood parks, Knights Avenue and Wildlife Drive Neighborhood Parks, even though they do not do not strictly fit the criteria established for neighborhood parks in terms of either size or facilities provided. Both parks are a part of a planned parkway with benches for viewing wildlife and natural features along an adjacent creek. Knights Avenue Neighborhood Park also contains play apparatus for the neighborhood residents.

Community Park: Community parks should range in size from 25 to 99 acres in area, have a service radius of two miles, and generally provide such

community-oriented facilities as official baseball diamonds and softball diamonds, soccer fields, and swimming pools. Also, such support facilities as parking, night lighting, concessions, and bleachers are generally provided in community parks but not in neighborhood parks. The plan recommends that the existing Kewaskum Kiwanis Community Park continue to serve as the community park for the entire planned urban service area. The plan, however, recommends that the park be expanded by 12 acres to the south to accommodate additional outdoor community-oriented recreational facilities that will probably be needed to serve residents of the planned urban service area. The community park currently offers a variety of outdoor recreation facilities, including a swimming pond, a beach house, tennis courts, playfields, and nature trails.

Other Public Park and Recreation Sites: Other public parks that are Village-owned include the River Hill Park and the Kewaskum Creek Park. Even though River Hill Park is perceived by local residents as a "community" park, it does not meet the size and facility criteria established for community parks. This park, however, contains the Kewaskum Historic Museum, play apparatus, and park shelters that are used throughout the year where major festivities are also held for the greater Kewaskum area, including the Fourth of July Fireworks, Firemen Legion Picnic, Early Farm Days, and Kettle Kountry Kolors festivals. The plan also recognizes the continued use of Kewaskum Creek Park, which is a part of a planned parkway along the Kewaskum Creek with benches and a trail leading to River Hill Park, under the railroad bridge crossing the creek.

Bicycle and Recreational Trail Facilities: As already noted earlier, the plan recommends that trail-oriented facilities be provided to assist in connecting significant man-made and natural features of the planning area for recreational and utilitarian purposes. These trails would accommodate pedestrians and bicyclists, serving as recreational facilities as well as safe pedestrian and bicyclist access to public parks and schools in the Kewaskum area. As shown on Maps 30, 31, and 33, a network of trails is recommended to traverse the planned urban service area, comprehensively linking planned residential areas and these areas to trails leading to public and private parks and recreation facilities, public and private schools, the new potential library/ community center, and the Kewaskum Central Business District.

As noted earlier, Map 33 shows a more detailed trail network system indicating not only the primary trail routes along planned parkways, as shown on Map 31, but also the secondary trail routes connecting planned residential areas to the main routes. It should be further noted that the collector and minor land- access streets within the planned urban service area can generally function as supplementary bikeways connecting to the primary bikeways shown on Map 30 without widening roadways because of the usually low traffic speeds and volumes on these streets. Ultimately, it is envisioned that this overall trail system would connect to the existing Kettle Moraine State Forest—Northern Unit to the east and the Ice Age National Scenic Trail to the south and east of the planning area, as shown on Maps 30 and 31. This interlinked network of trails would provide the residents of the Kewaskum area opportunities for a longer and wider array of trail-oriented recreational pursuits, such as hiking and biking, as well as safe and convenient utilitarian access to major activity centers.

TRANSPORTATION SYSTEM DEVELOPMENT

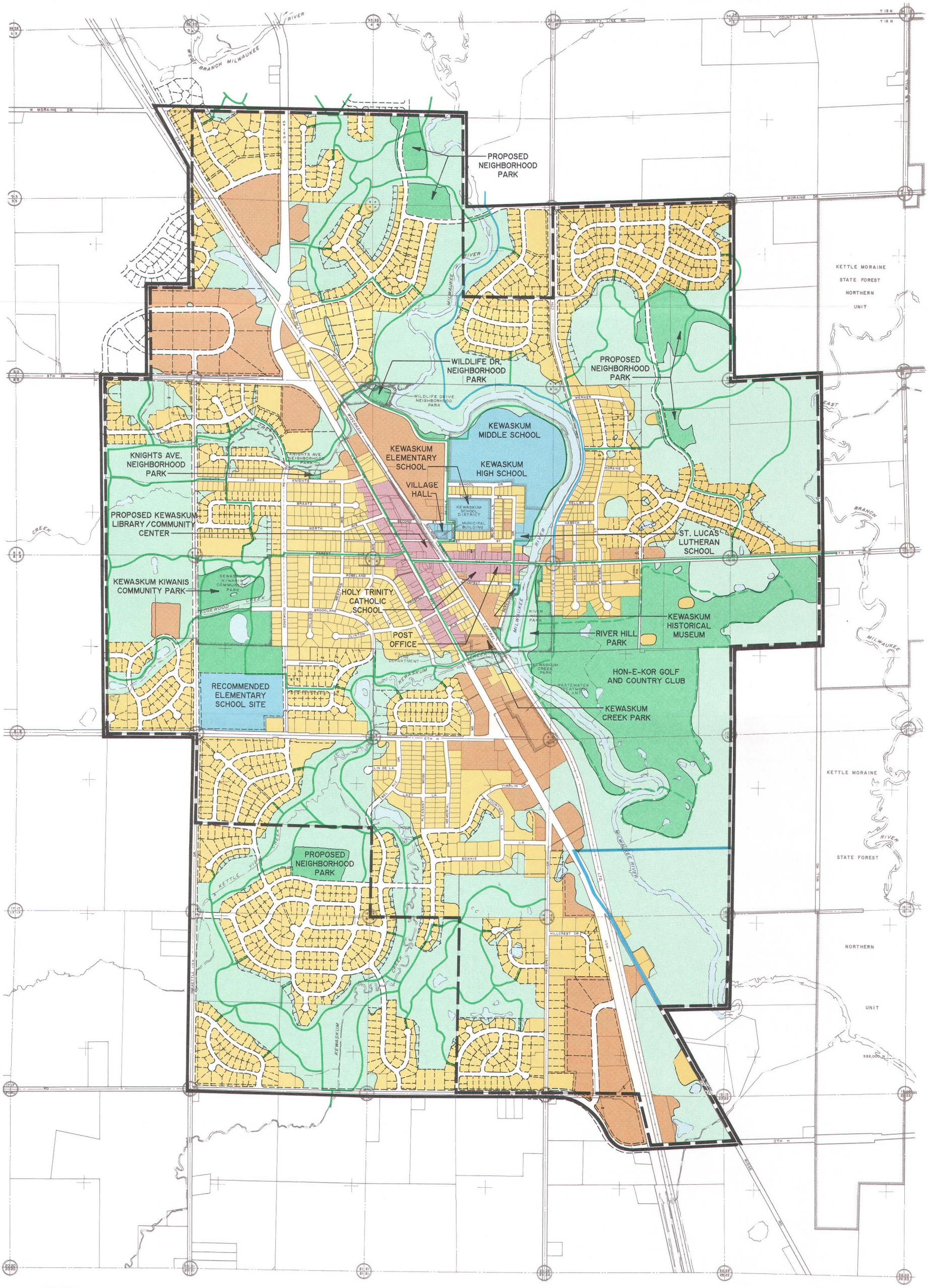
The land use plan recommends an integrated street system which, through its location, capacity, and design, can effectively serve the travel demand generated by the existing and proposed land uses incorporated in the recommended land use pattern. The attendant street system plan provides a framework for land use development in the Kewaskum area and is, therefore, regarded as a very important land use element. In the preparation of the street system plan, all modes of travel, including walking and bicycling, as well as carpooling and railroad services, were considered with emphasis on how those modes may affect the utilization of the street network.

Street and Highway System

The overall recommended street system plan for the Kewaskum planned urban service area, as shown on Map 34, is organized on a functional basis, consisting of arterial, collector, and minor land-access streets. This map also depicts the recommended jurisdictional system of arterial streets and highways for the Kewaskum planned urban service area. An efficient arterial street and highway network provides the necessary means of access from both rural and urban areas to supporting service, employment, recreational, and cultural centers. It is essential, therefore, that land use development be designed to protect the efficiency of the arterial

Map 33

RECOMMENDED RECREATIONAL TRAILS FOR THE VILLAGE OF KEWASKUM URBAN SERVICE AREA



LEGEND

- PLANNED URBAN SERVICE AREA BOUNDARY
- VILLAGE OF KEWASKUM PLANNED URBAN SERVICE AREA BOUNDARY: 2010
- ADOPTED WISCONSIN DEPARTMENT OF NATURAL RESOURCES PROJECT BOUNDARY
- SELECTED GOVERNMENTAL AND INSTITUTIONAL USES
- SELECTED PARKS AND RECREATIONAL USES
- KEWASKUM CENTRAL BUSINESS DISTRICT
- RESIDENTIAL LAND USES
- OTHER URBAN LAND USES
- SIGNIFICANT NATURAL AREAS
- SURFACE WATER
- LOCAL RECREATION TRAILS
- LOCAL CROSS-COUNTRY SKIING ONLY TRAILS
- WASHINGTON COUNTY RECREATION TRAIL

NOTE: SIGNIFICANT NATURAL AREAS CONSISTS OF AREAS DELINEATED AS ENVIRONMENTAL CORRIDORS, ISOLATED NATURAL RESOURCE AREAS, AND "OTHER OPEN LAND TO BE PRESERVED" ON THE RECOMMENDED LAND USE AND STREET SYSTEM PLAN. SEE MAP 32.

GRAPHIC SCALE
0 400 800 1600 FEET

Source: SEWRPC.

street and highway system and to utilize that system as fully as practicable. Transportation system plans should also work to minimize street and highway improvement costs and the disruption of existing development and sensitive natural areas.

Map 20 in Chapter V reflects the adopted regional transportation system plan, documented in SEWRPC Planning Report No. 41, titled A Regional Transportation Plan for Southeastern Wisconsin: 2010, December 1994, which recommends a functional and jurisdictional system of arterial streets and highways to serve the Region, including the Kewaskum planning area, through the design year 2010. The recommendations of this adopted plan are incorporated into Map 34. If implemented, these recommendations would result in an arterial street and highway system adequate to serve the Village of Kewaskum under the high-growth decentralized future scenario. This future growth scenario is reflective of the planned land uses shown on Map 32 for the Village of Kewaskum 2010 planned urban service area, except more commercial area is planned northwest of the intersection of USH 45 and CTH V than probably will be required by the year 2010. One of the important transportation recommendations under this scenario is that four travel lanes should be provided and parking prohibited on the segment of USH 45 between the Village of Kewaskum southern corporate limits and Main Street. If development extends beyond the Village 2010 planned urban service area boundary and develops in accordance with the land uses shown on Map 32 for the larger planned urban service area, then a north segment of USH 45 in the Village, between Main Street and STH 28, will also need to provide four travel lanes with prohibited on-street parking to help alleviate traffic congestion along this arterial. To further help alleviate potential congestion along USH 45 in the Village, it is important to preserve the traffic capacity of the segments of Kettle View Drive and Badger Road which are defined as planned arterial streets under Washington County jurisdiction on Map 34.

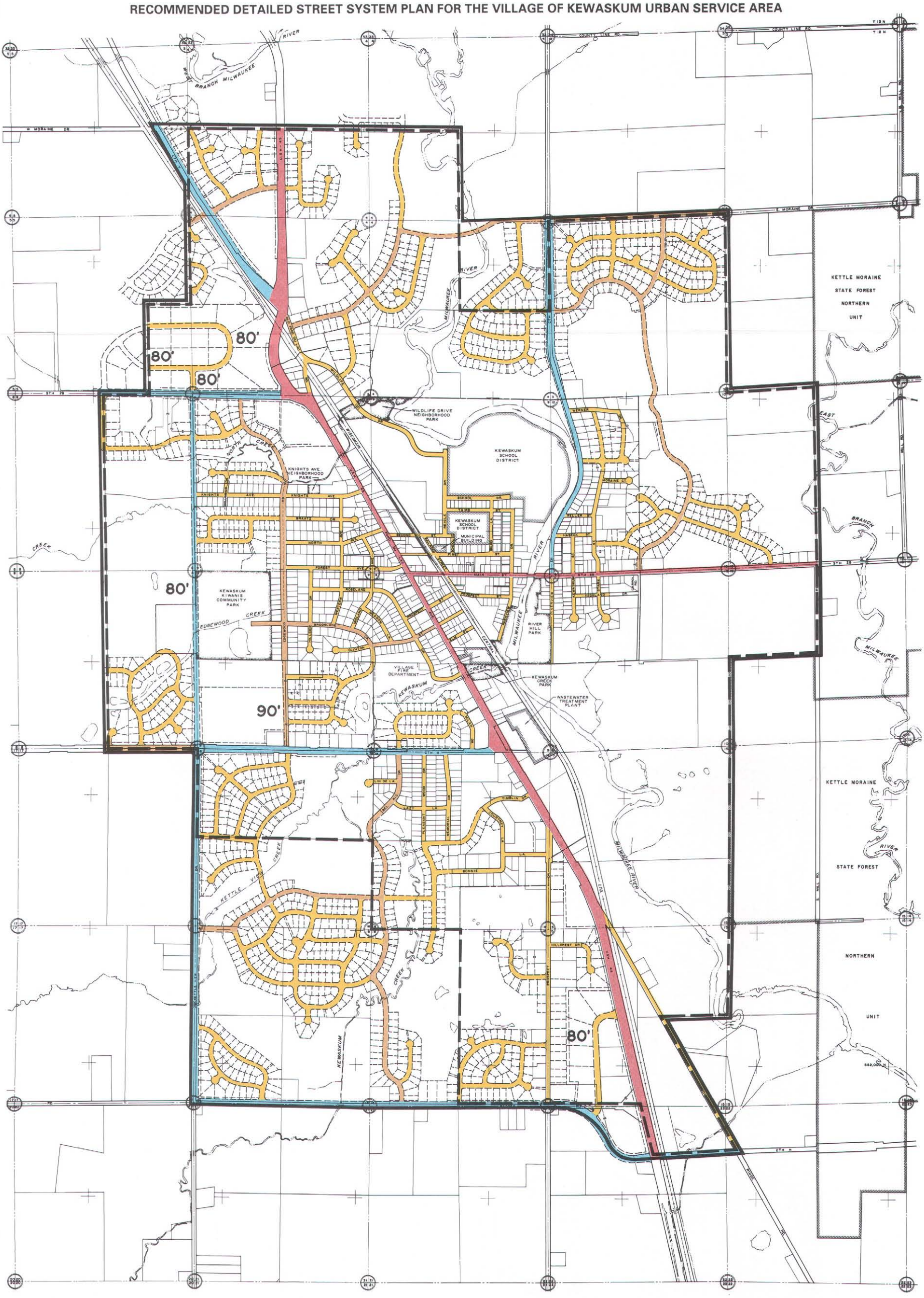
Since the land use and street system plans are to represent full development of the Kewaskum planned urban service area, the Village determined that the arterial street system plan should identify potential ultimate right-of-way widths for these streets. For example, six planned arterial streets are likely to require significant additional right-of-way to accommodate future increases in traffic: CTH V, extending northwest of USH 45; CTH H, extending west of USH 45 to Kettle View Drive; the proposed realigned Badger Road, extending west from USH 45 to Kettle View Drive; Kettle View Drive, extending north of Badger Road to STH 28; STH 28, extending west of USH 45; and CTH S, extending north of Main Street (STH 28). The Village determined that the minimum right-of-way width for the planned County trunk highways should be 100 feet to accommodate at least two travel lanes and to ensure that sufficient right-of-way is obtained to accommodate any future roadway improvements that may be needed to provide the necessary traffic capacity on these arterials beyond the year 2010. The planned rights-of-way of these arterial streets are also sufficient to accommodate the bicycle ways designated on Map 30.

Map 34 also depicts the general locations of proposed collector and minor land-access streets for the recommended land use plan. Collector streets were arranged to collect traffic from urban uses abutting minor land-access streets and to convey it to the arterial streets and activity centers identified on the plan. Collector streets should be related to such special traffic generators as schools, churches, shopping centers, and other proposed concentrations of population or activities and to the major streets to which they connect. The minor land-access street network was designed to achieve the most efficient use of land; to discourage use by through traffic; to minimize street area and cost; to provide an attractive setting for residential development; to facilitate the provision of efficient storm-water-drainage, sanitary-sewerage, and public water-supply facilities; and to complement the natural terrain, thereby minimizing the need for extensive grading during the development process. All street locations were based upon careful consideration of a number of factors, including soil characteristics, topography, property boundaries, the hierarchy within the total street system, existing and proposed land uses, the principles of good neighborhood planning, and the urban design guidelines presented in Chapter VI. Suggested cross-sections for these streets are shown in Figure 4 in Chapter VI.

It is important to note that the suggested cross-sections and the attendant street right-of-way widths shown on Map 34 are, in all cases, typical and may be subject to variations with regard to a number of considerations, including topography, vehicular and pedestrian traffic patterns and volumes, traffic and parking lane widths, bicycle

Map 34

RECOMMENDED DETAILED STREET SYSTEM PLAN FOR THE VILLAGE OF KEWASKUM URBAN SERVICE AREA



LEGEND

PLANNED URBAN SERVICE AREA BOUNDARY

VILLAGE OF KEWASKUM PLANNED URBAN SERVICE AREA BOUNDARY: 2010

ARTERIAL STREETS AND HIGHWAYS

STATE TRUNK HIGHWAY

EXISTING RIGHT-OF-WAY

RECOMMENDED RIGHT-OF-WAY (VARIES 66 TO 150 FEET)

COUNTY TRUNK HIGHWAY

EXISTING RIGHT-OF-WAY

RECOMMENDED RIGHT-OF-WAY (MINIMUM 100 FEET WIDE UNLESS SPECIFIED)

COLLECTOR STREETS

EXISTING RIGHT-OF-WAY

RECOMMENDED RIGHT-OF-WAY (MINIMUM 80 FEET WIDE UNLESS SPECIFIED)

MINOR LAND-ACCESS STREETS

EXISTING RIGHT-OF-WAY

RECOMMENDED RIGHT-OF-WAY (MINIMUM 66 FEET WIDE UNLESS SPECIFIED)

NOTE: THE RECOMMENDED WIDTHS OF STREET RIGHTS-OF-WAY FOR ALL FUNCTIONAL STREET CLASSIFICATIONS ARE IN ALL CASES TYPICAL, AND ARE SUBJECT TO CHANGE DUE TO PHYSICAL FACTORS. NECESSARY VARIATIONS SHOULD BE DETERMINED DURING ENGINEERING STUDIES FOR SPECIFIC STREET AND HIGHWAY PROJECTS. ADDITIONAL RIGHT-OF-WAY MAY ALSO BE NEEDED TO ACCOMMODATE BICYCLE FACILITIES.

GRAPHIC SCALE
0 400 800 1600 FEET

Source: SEWRPC.

path and lane widths, and relation to adjacent land uses. Necessary variations should be determined during engineering studies for specific street and highway projects. The cross-sections and right-of-way widths are shown in order to provide the appropriate jurisdictional agencies and local officials with an indication both of the amount of right-of-way that should be reserved to accommodate the required number of traffic lanes and the pavement widths that are suggested as a starting point for further engineering studies. Such studies should be conducted prior to street construction in the Kewaskum area, in part, because of potential physical constraints that may arise. This is illustrated by the varied right-of-way widths required for USH 45, shown on Map 34, to overcome steep topography and other physical constraints. Similar constraints may arise for other streets because of the unique and steep glacial topography and large areas of wetlands that exist in the Kewaskum area. Additional right-of-way may also be needed to accommodate the recommended bikeways identified on Map 30 of this chapter.

Park-and-Pool Lot

As noted in the previous Chapter VII, the adopted regional transportation system plan recommends that a "park-and-pool" lot be provided near the intersection of CTH H and Fond du Lac Avenue (USH 45) within the Village of Kewaskum. By promoting car-pooling for longer commuting trips, the vehicular travel demand would be reduced, thereby saving motor fuel and capital investment in arterial street and highway improvements. Maps 29 and 32 show a potential "park-and-pool" lot to be provided northwest of the intersection of CTH H and Fond du Lac (USH 45).

Railroad

The recommended plan envisions that the Wisconsin Central Transportation Corporation will continue to provide railroad freight services. The Village of Kewaskum would continue to be served by this common carrier railroad service on its main line from Milwaukee to Green Bay via Fond du Lac. The railroad would serve as a factor in the location of certain land uses in the Village planned urban service area.

URBAN DESIGN RECOMMENDATIONS

The Village Plan Commission requested that the plans provide general urban design guidelines for improving the Kewaskum Central Business District (CBD) and other urban development within the Village urban service area. While it is not the purpose of the land use plan to provide detailed plans for subareas and specific development and redevelopment recommendations, which would require structural condition surveys, commercial market analyses, and site- or building-specific improvement designs, it was determined that the plan should set forth generally applicable urban design guidelines that would be useful to public officials in the review of site-specific development and redevelopment proposals and thereby assist in implementing the Village land use plan.

General Recommendations

During the planning process, certain urban design problems were observed within the Village and environs. These observations indicated that several elements of urban design should be addressed within the Village, including elements relating to the historic CBD, streetscaping, utility poles and lines, offsite landscaping, architectural compatibility, and certain transportation- related elements. Based, in part, on the urban design guidelines set forth in Chapter VI, specific recommendations for addressing the identified urban design problems are provided here. The appearance and proper design of urban developments and redevelopments within the Village, consistent with the suggested urban design solutions herein recommended, will help to produce, over time, a more attractive community and will help to stabilize or increase real property values to the advantage of both the community and of individual property owners.

Historic Central Business District and Environs:

The concentration of unique old buildings in the Kewaskum CBD is not used as effectively as possible as a source of community identity. By enhancing this resource, a distinctive positive image of the Village can be projected to pedestrians, bicyclists, and occupants of motor vehicles traveling through the District, centered on the intersection of the two major arterials, Fond du Lac Avenue (USH 45) and Main Street (STH 28), which form the axes of the District. This area could provide an important focus of identity for the Village. Even though the Village identifies its "downtown" area as the Kewaskum CBD, its boundaries have not been delineated. Maps 28 and 33 attempt to define the potential boundaries of this district to help provide a more precise sense of location.

The Village, with assistance from a qualified professional, should conduct a communitywide inventory of historic resources to refine those identified on

Map 15 in Chapter IV, including those in the Kewaskum CBD. The identification of significant historic places and the delineation of a historic district, if any, should also be carefully evaluated for possible inclusion in the National and State Register of Historic Places. If registered, such special status would help to qualify proposed historic rehabilitation projects for potential tax incentives offered by the State and Federal governments. Any city or village containing property listed on the National or State register of historic places must enact a historic preservation ordinance to protect and preserve such resources. Opportunities for experiencing the designated historic features, for example, in the Kewaskum CBD, could then be promoted by identifying and describing those features with explanatory plaques along a marked historic trail. This trail could be further established as part of the recreational trail network for the Village of Kewaskum, as shown in Map 33.

By preserving significant historic features and improving the historic streetscape in the Kewaskum CBD, a unique Village identity could be established. Trees, shrubs, and flowers could be planted along the street facades to enhance its attractiveness. Historic "street furniture," such as signs, benches, bollards, or a clock tower, could also be installed. Streetlamps at a pedestrian scale and of a design compatible with the historic buildings would further enhance the historic image. Historic photographs are an excellent means of identifying the former appearance of the District. Discordant elements, such as a clutter of poles and wires, even if historically accurate, should be avoided. Chapter VI sets forth historic preservation and urban design guidelines. Figure 34 provides a generalized example of potential streetscape improvements that could be applied in the historic Kewaskum CBD.

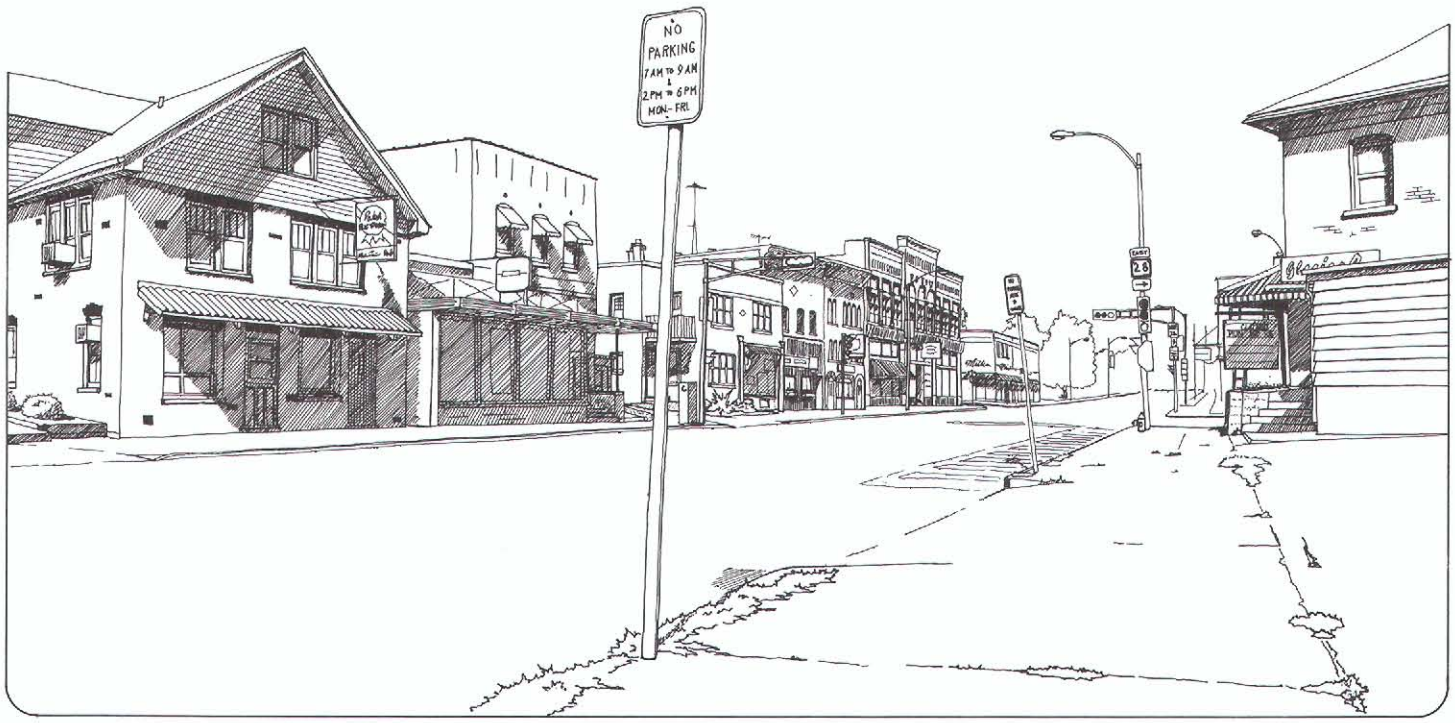
As noted above, the Village has been working toward improving the vitality of its downtown. Map 35 schematically identifies additional improvements for a portion of this area. Figure 35 illustrates the view that could be projected along the two major arterial streets forming the axes of this district if streetscape improvements were installed, as indicated on Map 35. This plan map also shows the potential building and parking lot layout for a new library and/or community center on Main Street and recommended parking and traffic patterns for other areas in the district. The recommended location of the library and/or community center close to the existing sidewalk is an attempt to retain the pedestrian-oriented downtown development pattern as opposed to setting the building in the rear with parking in front, which would disrupt the pedestrian scale of the District and make the building less readily accessible to pedestrians from public sidewalks. The building should be carefully situated in relation to the existing railroad to ensure adequate sight distance for vehicles on Main Street attempting to cross the tracks. The resulting streetscape for the CBD should reflect the overall urban design character desired by community residents and business owners.

Streetscaping: Streetscape improvements should be made, not only in the Kewaskum CBD, but also along other streets within the planned urban service area. Streets within the Village have received minimal landscaping in the form of street trees, unique lighting fixtures, or distinctive street signs. Landscape plantings, especially trees, along arterial streets and on abutting properties can help to define the street lines visually, add texture and color, provide shade and screening, and fill void spaces. Some streets in the Village, such as Railroad Street and First Street, lack clearly defined paving edges with curbing and terraces to separate sidewalks from streets and parking lots. Sidewalks located immediately adjacent to vehicular travel lanes and parking lots discourage pedestrian travel because of the perception of hazard. Terraces separating sidewalks from such areas help reduce this perception and provide a more pleasant pedestrian environment by furnishing an area off the sidewalk for street trees and other landscape plants, colorful patterned brick pavements, such street furniture as decorative streetlights and benches, driveway aprons, snow storage, and a refuge from water splashed by passing vehicles.

Some of the streetscape improvements for Fond du Lac Avenue and Main Street illustrated earlier in Figures 34 and 35 can also be applied to other street rights-of-way within the Village. The streetscape theme selected for other streets should complement the urban design character selected for the Kewaskum CBD. Even though the theme may not be carried out to the same extent along all collector and minor land-access streets within the Village, decorative street signs with logos, uniquely colored fire hydrants, and attractive street trees planted in curb lawns or terraces along such streets are recommended. Ultimately, the overall streetscape of the planned urban service area should be brought into accord with the urban design guidelines set forth in Chapter VI and the design recommendation discussed here.

Figure 34

TYPICAL STREETSCAPE IMPROVEMENTS APPLICABLE TO THE KEWASKUM CENTRAL BUSINESS DISTRICT



1994 NORTHWEST VIEW OF FOND DU LAC AVENUE (USH 45)
NEAR ITS INTERSECTION WITH MAIN STREET (STH 28)

POTENTIAL VIEW AFTER IMPROVEMENTS

Source: SEWRPC.

Map 35

POTENTIAL GENERAL DEVELOPMENT PLAN FOR A PORTION OF THE KEWASKUM CENTRAL BUSINESS DISTRICT

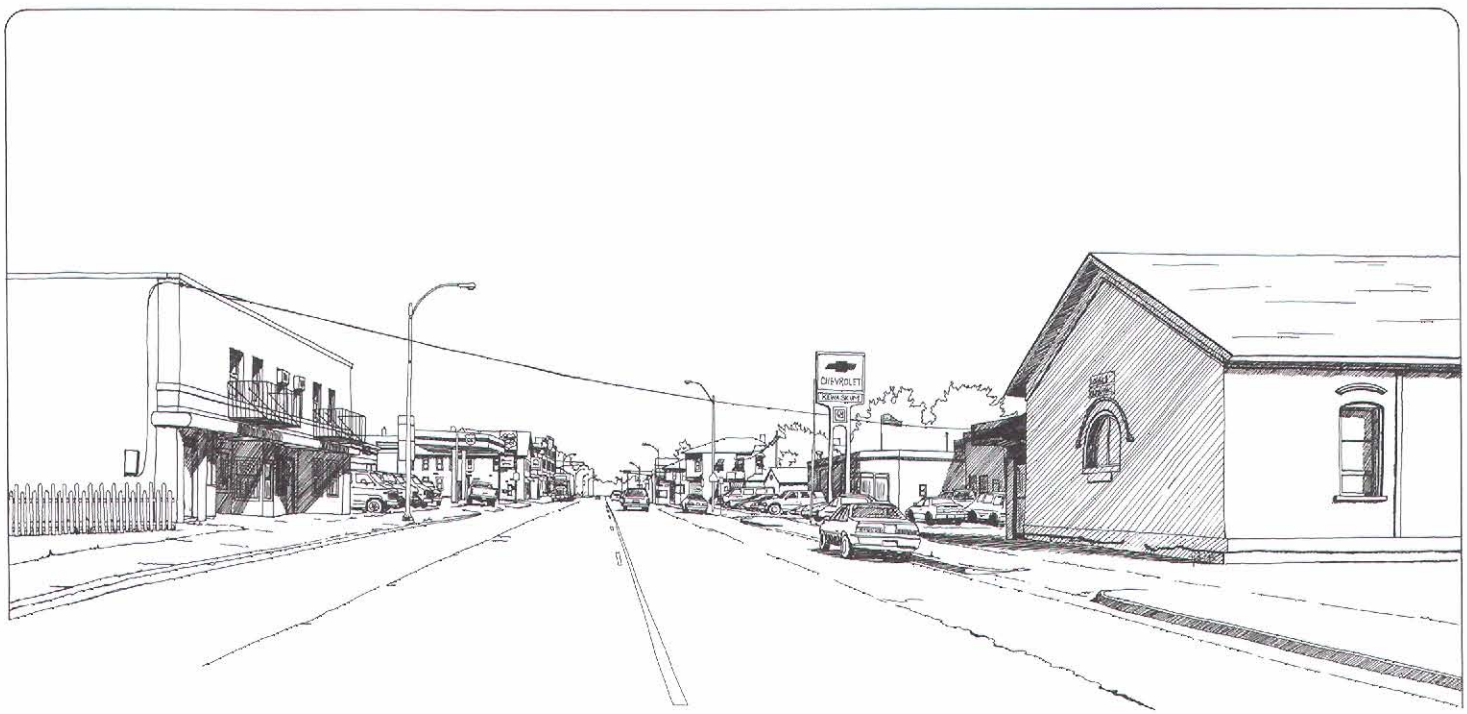
Source: SEWRPC.

Utility Lines and Poles: The overhead wires and supporting structures of the electric and telephone lines create a sense of visual clutter along streets within the Village. One possible solution for this problem is to continue to bury utility lines, as has been demonstrated by the Village in the past. Another solution is to relocate these lines and supporting poles to such less visible areas, like the rear of properties. Figure 35 illustrates the existing clutter of utility lines and poles visible from Main Street and the reduction of clutter possible if the solutions were implemented. It is recommended that all overhead utility lines within the Village planned urban service area be buried. As an alternative, overhead utility lines could be located in less visible areas.

Figure 35

POSSIBLE STREETSCAPE IMPROVEMENTS APPLIED TO DIFFERENT LOCATIONS IN THE KEWASKUM CENTRAL BUSINESS DISTRICT

A. FOND DU LAC AVENUE (USH 45) LOOKING NORTHWEST FROM PROSPECT STREET

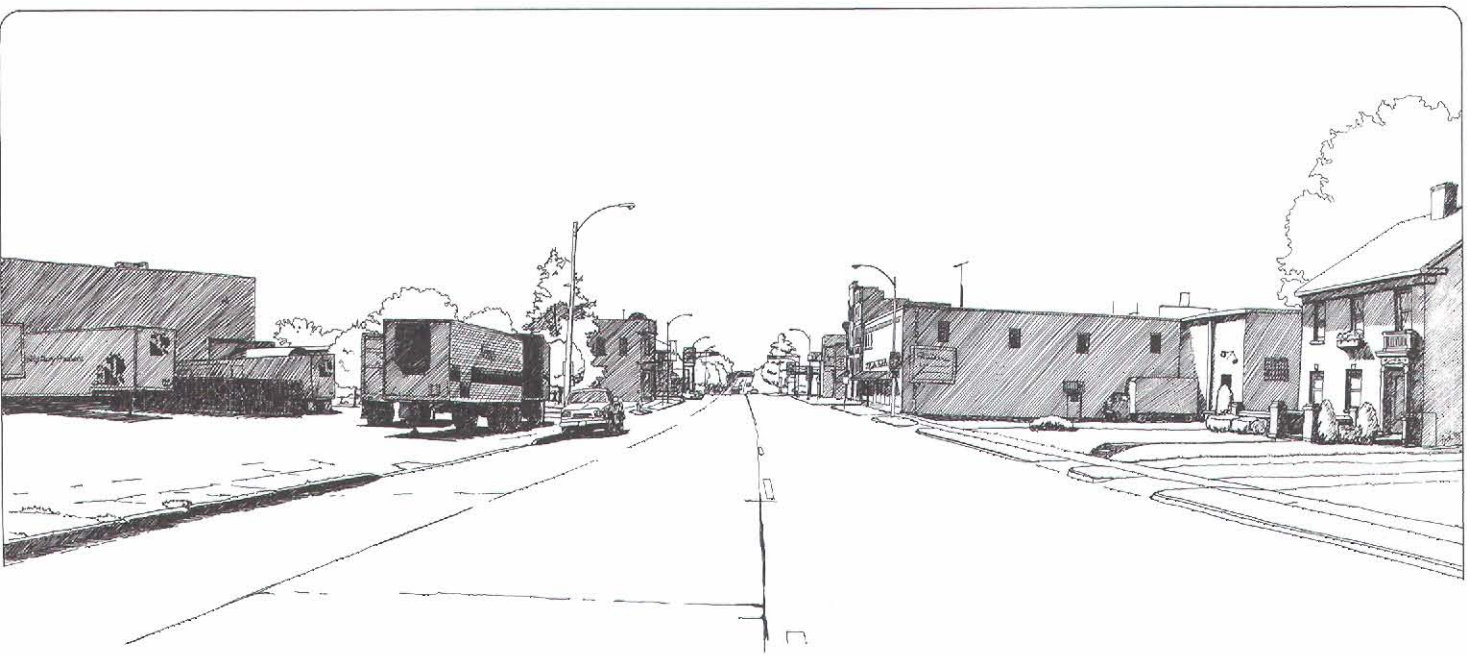


1994 VIEW

POTENTIAL VIEW AFTER IMPROVEMENTS

Figure 35 (continued)

B. FOND DU LAC AVENUE (USH 45) LOOKING SOUTHEAST FROM SECOND STREET

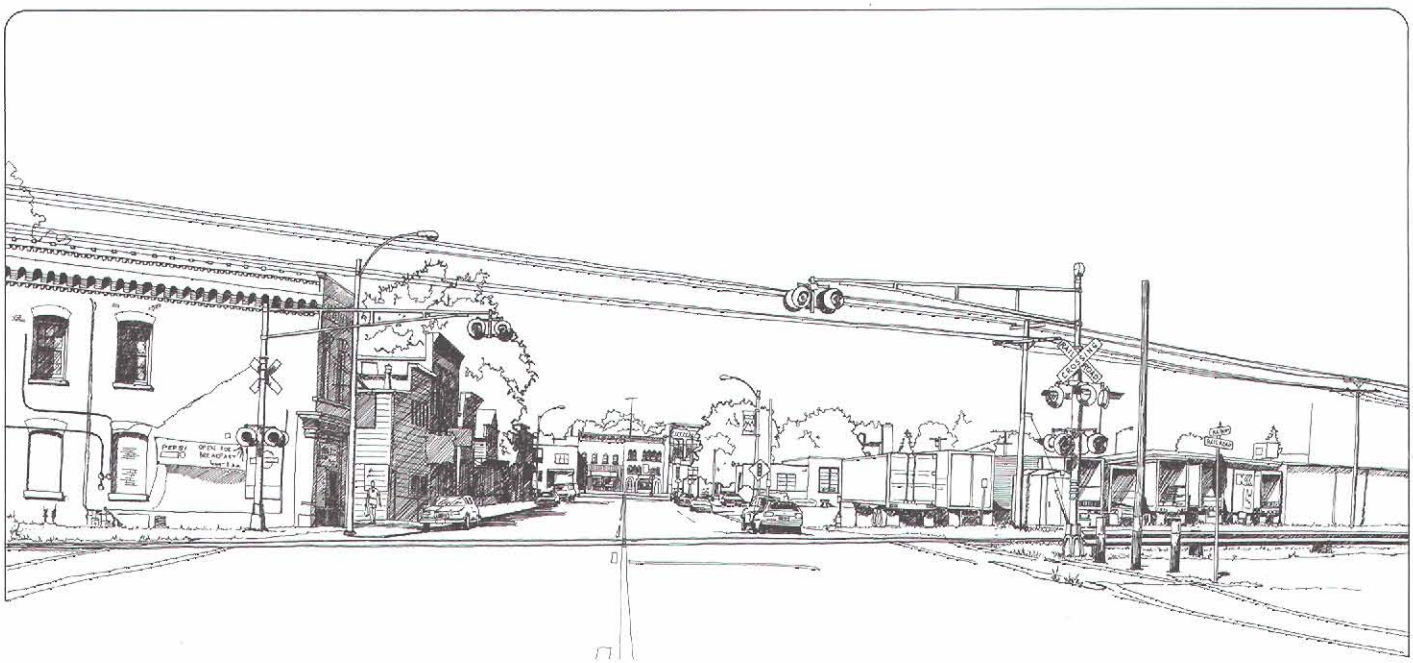


1994 VIEW

POTENTIAL VIEW AFTER IMPROVEMENTS

Figure 35 (continued)

C. MAIN STREET (STH 28) LOOKING WEST FROM RAILROAD STREET



1994 VIEW

POTENTIAL VIEW AFTER IMPROVEMENTS

Source: SEWRPC.

Signs and "Entryways": Most existing advertising signs adjacent to the arterial streets of the Village are provided with little or no landscaping around the base of the sign. Village "Welcome" signs are either lacking entirely or are not highly visible from the public streets. By providing flower beds, colorful shrubs, and flowering trees in an elevated planter with decorative mulch at the base of such signs, without obstructing the face of the signs, their legibility and appearance could be improved, as illustrated in Figure 21 in Chapter VI. "Welcome" signs should use large lettering and be situated at key roadside locations where the sign is readily visible and legible to occupants of motor vehicles entering the Village along the major arterials. Generally, the fewer the words on sign faces, the more comprehensible the signs will be. Large lettering properly spaced is more easily read from long distances and from moving vehicles. Figure 28 in Chapter VI further illustrates desirable signage for buildings within the historic Kewaskum CBD.

Special events and festivities could be advertised by the use of large, colorful banners elevated and extending across Fond du Lac Avenue and Main Street at three key locations: across Main Street, near the intersection of Carrol Road and Main Street, and across Fond du Lac Avenue in two location, near Kewaskum Creek and the intersection of Knights Avenue and Fond du Lac Avenue. As an alternative, such banners could be located on permanent archway structures installed at these three locations. The archways could further serve as "Welcome" signs or simply as a symbolic "entryway" or "gateway" structure, as conceptually illustrated in Figure 36, to emphasize that one is entering the Village of Kewaskum, promoted as the "gateway" to the Kettle Moraine State Forest—Northern Unit. The structure recommended to the south of the Village, across Fond du Lac Avenue near Kewaskum Creek, would serve as the symbolic "gate" leading to the Kettle Moraine State Forest. Main "entryways" into parks, residential neighborhoods, commercial centers, and industrial parks should also be well defined with attractive landscaping and signs to provide a sense of identity and direction, as illustrated in Figure 18 and discussed further in Chapter VI. The design of archways and defined entryways should be representative of the urban design theme selected by the community.

Parking Lots: Many parking lots in the Village lack adequate landscaping and are not well defined, creating unattractive and unsafe "seas of asphalt." The function and aesthetics of parking areas can be improved by providing landscape islands in the interior of the parking lots and at the end of parking rows, by screening parking lots from adjacent residential areas and from public streets, by requiring protective curbing around landscape areas, and by requiring permanent paving with striped parking spaces and, as necessary, "wheelstops" or low "bumpers."

It is important to note that the provision of landscape islands is recommended, not only for aesthetic reasons, but also for functional and safety purposes. Islands located at the end of parking rows separate parked vehicles from driveways; provide an indication of the parking orientation and layout; and provide visual clearance areas, except for the minor obstruction of a tree trunk or light pole located in the island, for vehicles driving out of the general parking areas onto adjacent driveways. Islands that provide visual clearance areas should maintain a clear zone between the heights of 2.5 feet and 10 feet above the mean pavement grade adjacent to these islands. Any plants proposed in these islands should be salt-tolerant. Figure 13 in Chapter VI provides parking lot design standards and Figures 8 and 22 in that chapter illustrate potential landscaping that could be provided in parking lots.

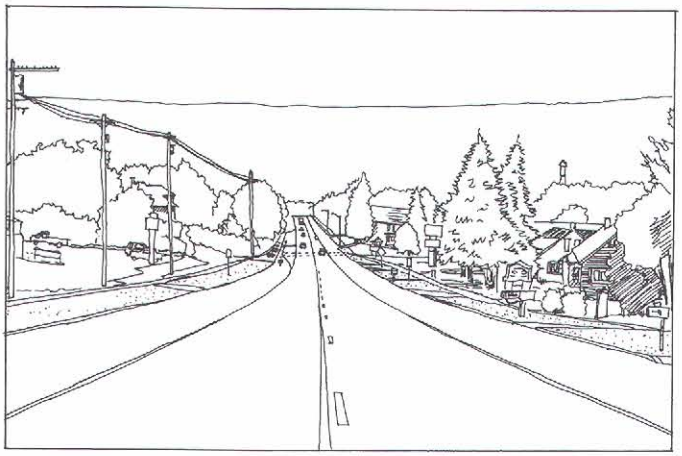
In some cases, the number of parking spaces and the width of traffic aisles provided for individual land uses may be inadequate, in other cases excessive. Too few parking spaces with inadequate traffic aisles create an inconvenience to tenants or customers and may encourage vehicles to park on public streets, thus increasing the potential for pedestrian-vehicular conflicts. Too many parking spaces with excessively wide traffic aisles convey inefficient use of lands that could otherwise be converted to attractive landscaped areas. Parking needs and parking lot layouts should be carefully examined for any proposed development or redevelopment projects in order to assess compliance with good design practices, as illustrated in Map 35.

Buffers and Perimeter Landscape Strips: The provision of adequate and attractive perimeter landscaping strips, which may also function as buffers with plantings along the boundaries of many individual sites, is lacking within the Village. In some cases, perimeter landscaping strips are not provided and entrances and exits to parking lots along Fond du Lac Avenue (USH 45) are not well defined, as shown

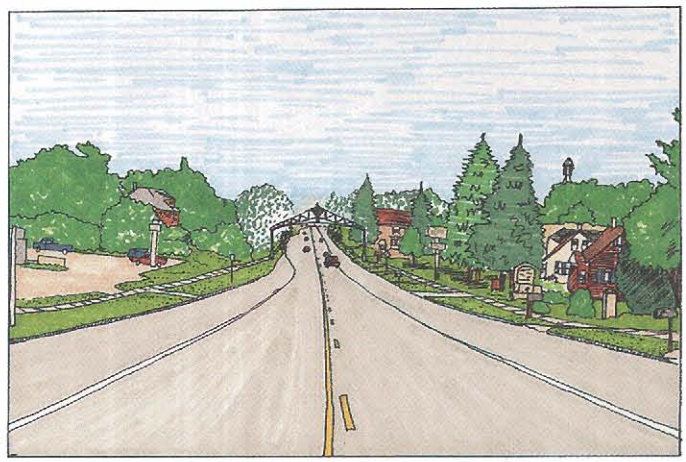
Figure 36

POTENTIAL 'ARCHWAY' STRUCTURES PROVIDED AT KEY LOCATIONS WITHIN THE VILLAGE OF KEWASKUM

A. FOND DU LAC AVENUE (USH 45) LOOKING NORTHWEST FROM CTH H

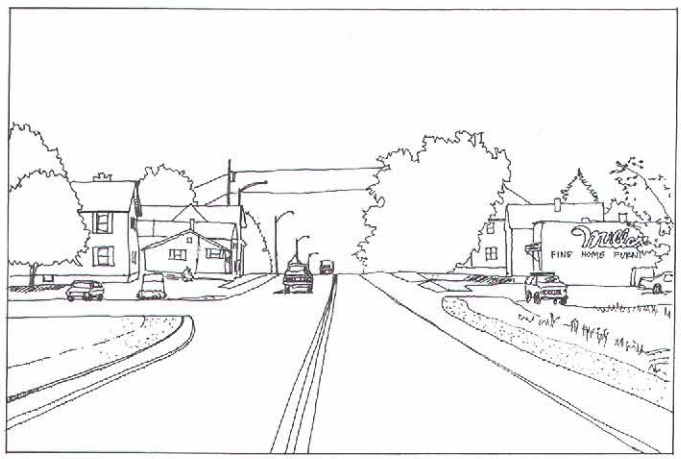


1994 VIEW



POTENTIAL VIEW AFTER INSTALLATION

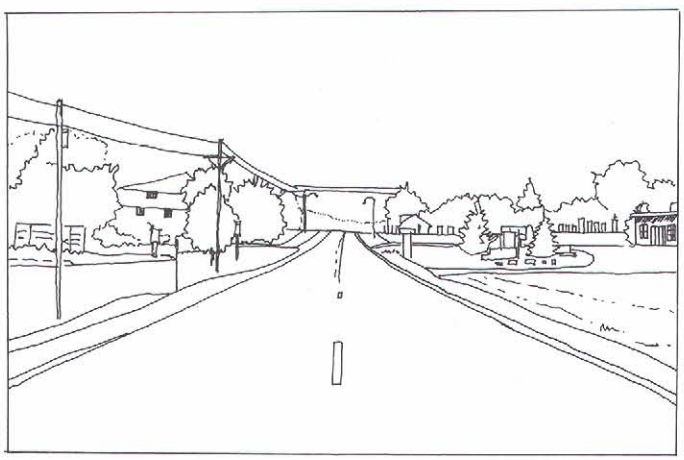
B. FOND DU LAC AVENUE (USH 45) LOOKING SOUTHEAST FROM NORTH CREEK



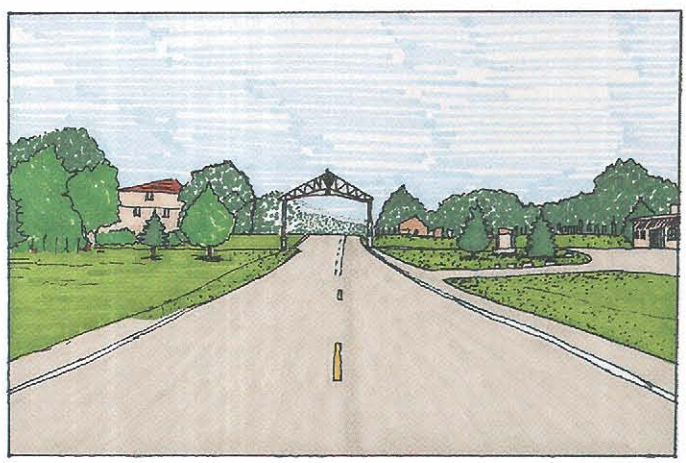
1994 VIEW

POTENTIAL VIEW AFTER INSTALLATION

C. MAIN STREET (STH 28) LOOKING WEST FROM THE HON-E-KOR GOLF COURSE



1994 VIEW



POTENTIAL VIEW AFTER INSTALLATION

Source: SEWRPC.

in Figures 34 and 35. Perimeter landscaping strips located around an entire parcel provide space for attractive landscaping, screening from incompatible land uses, and filtration of stormwater runoff. These strips further clearly define the boundaries and entrances of a property and provide separation between parking lots and public street rights-of-way. Perimeter landscaping strips, however, are not necessary for adjoining sites that share entrances, traffic aisles, and parking lots at a common lot line.

A buffer may be defined as a landscape area that surrounds a land use and reduces or blocks visual nuisances, air and noise pollutants, or other negative factors associated with that use. Buffers can help the Village protect property values by separating dissimilar land use types and intensities visually and physically. The Village zoning ordinance does not contain specific provisions for such buffer areas and attendant landscaping. Buffers may represent a variety of features, including earth berms with plantings, fences and walls with plantings, wide open spaces, and grade separations in order to buffer dissimilar land uses effectively. The recommended land use plan identifies where landscaped buffer strips should be provided between new urban developments and incompatible adjacent land uses, as shown on Map 32. Additional buffers should be provided, as necessary, when existing urban areas are redeveloped. Figure 19 in Chapter VI shows alternative landscaping that could be provided in such buffer areas.

Building Foundation Landscaping: A significant number of commercial, industrial, and multi-family building elevations in the Village that are visible from public streets and adjacent to customer and tenant parking lots do not provide sufficient landscaping at their foundation. These highly visible building elevations should be landscaped along the foundation with decorative mulch, flowers, shrubs, and trees to complement and enhance the aesthetics of the building as well as of the site. As illustrated in Figure 20 of Chapter VI, the planting beds do not necessarily have to be narrow linear strips located directly against a building, but may consist of large planting beds located at or near the dripline of roof overhangs. Building foundation plantings, including low planters, also help break up the monotony of tall and long continuous building walls.

Architectural Compatibility of Buildings and Related Structures: A number of existing buildings and related structures in the Village, including those in the historic Kewaskum CBD, exhibit features that do not complement the neighboring buildings and structures. The architectural design guidelines established in Chapter VI state that, although facades of two adjacent buildings may be different, their overall appearance should be made compatible through the proper use of structural elements, including the building shape and proportion, the placement of openings such as doors or windows, and the placement of signs. Street trees and other general landscape materials that complement the buildings should also be installed along the street facades of these buildings. Figure 37 shows the existing building elevation along the south side of Main Street (STH 28), between Fond du Lac Avenue (USH 45) and the Wisconsin Central Transportation Company railroad right-of-way, and a portion of the elevation along the west side of Fond du Lac Avenue (USH 45), between Prospect Street and First Street, along with the potential view of these street facades after the application of both building and streetscape improvements.

Appendix B provides general architectural review guidelines that could be applied to the historic Kewaskum CBD. A more detailed architectural design guideline than that provided here could be prepared for the district. As noted in Chapter VI, any historic preservation actions should be undertaken in accordance with the standards promulgated by the U. S. Department of the Interior for all forms of historic preservation, including acquisition, protection, stabilization, preservation, rehabilitation, restoration, and reconstruction of significant historic features, including buildings. In addition, any historic features listed on the national or state register of historic places must be protected and preserved in accordance with a historic preservation ordinance enacted by the municipality.

Maintenance: The proper maintenance of buildings and other structures, as well as landscaping, will help retain the aesthetic appeal of buildings and grounds within the Village over time. Buildings, fences, decks, and other structures should be kept in good condition and proper appearance by performing such routine maintenance tasks as painting, staining, repairing, replacing, and cleaning when necessary. Building code compliance and architectural review requirements are methods of ensuring that structures are properly maintained.

Landscaping should be provided only if it will be properly maintained by watering, pruning, mowing, edging, staking, fertilizing, spraying, and replacing when necessary. To ensure that these features are

Figure 37

POTENTIAL URBAN DESIGN IMPROVEMENTS APPLIED TO STREET FACADES WITHIN THE KEWASKUM CENTRAL BUSINESS DISTRICT

A. PART OF THE WEST ELEVATION OF FOND DU LAC AVENUE (USH 45), BETWEEN PROSPECT STREET AND FIRST STREET

1994 ELEVATION

ELEVATION AFTER IMPROVEMENTS

B. SOUTH ELEVATION OF MAIN STREET (STH 28), BETWEEN FOND DU LAC AVENUE (USH 45) AND THE WISCONSIN CENTRAL TRANSPORTATION COMPANY RAILWAY

1994 ELEVATION

ELEVATION AFTER IMPROVEMENTS

Source: SEWRPC.

properly installed and maintained, upon submittal and approval of landscape plans for urban development or redevelopment proposals, a comprehensive maintenance schedule and a bond should be required to ensure that the initial installation and maintenance of landscape materials is in accordance with the approved plans.

Specifically, plants selected for use in certain areas of the urban environment, such as parking lots and along streets, should be salt-tolerant. Stone mulch with an underlying fiberlike weed barrier is recommended to be used in lieu of grass in certain areas where heavy pedestrian and vehicular traffic is present or where the possibility of watering is limited. If grass is proposed in landscaped areas, it should be properly maintained and protected from pedestrian and vehicular traffic, otherwise an "all-weather" surface material is recommended, such as a decorative pavement surface or mulch with underlying weed barrier. Excessive paving of open space areas with such hard-surface materials as asphalt or concrete should be discouraged. Flower beds should be provided only if provisions are made for proper maintenance. Decorative stone or bark mulch in plant beds should be kept weed-free and replenished over time.

Vehicular Access Points: Excessive driveway access points along arterial streets within the Village, such as Fond du Lac Avenue (USH 45), Main Street (STH 28), and CTH H, add to the potential for traffic conflicts and accidents and decrease the traffic capacity and safety of the streets concerned. Driveways along major arterial streets should be reduced by eliminating driveways or combining driveways to establish shared driveways between adjoining properties. Access along major arterials can be further controlled by requiring no-access easements along the street frontage of any proposed development, as indicated in Map 32. Table 24 in Chapter VI specifies the minimum spacing that should be provided between driveways along arterial streets. As urban development or redevelopment occurs along existing and planned arterial streets, the Village should attempt to reduce or limit the number of driveways.

The function of major arterial streets can be further improved by ensuring that private driveways as well as public streets are located at sufficient distances from the intersections of arterial streets with other streets or with railroads. Within certain areas of the Village, private driveways or streets are located too close to such major intersections. To the extent practicable, these separation distances should be increased. As discussed in Chapter VI, the distance between new direct public or private access and an arterial street intersection should be at least 115 and, preferably, 250 feet, where parcel size permits.

Pedestrian, Bicycle, and Recreation Trail Facilities: The Village should provide pedestrian walkways, bikeways, and other linear recreation facilities that would serve to link important historic, recreational, and scenic areas. Pedestrian circulation is typically provided by concrete sidewalks along the existing street rights-of-way parallel to the street pavements and street-facing building facades within the Village. Crosswalks are properly provided at major street intersections; however, few are provided at midblock within the Village, including the Kewaskum CBD. As the community continues to develop, a need will arise for safe pedestrian and bicycle crossings at major arterial street intersections such as the intersections of USH 45 with STH 28, CTH V, and CTH H. Handicap ramps, pedestrian crossing lights, and crosswalk paving lines at these intersections will improve the pedestrian and bicyclist safety. In addition, sidewalks at least five feet wide should be provided along the aforementioned arterials and CTH S, an existing arterial street, and the planned arterial streets, segments of Badger Road and Kettle View Drive, as the community develops.

As noted earlier in this chapter, trail-oriented facilities are recommended to be provided for both utilitarian and recreational purposes. The Village should prepare a comprehensive trail facility plan for pedestrians, for bicycle circulation, and for recreation in order to identify the specific location and type of such facilities to be provided throughout the Village. These facilities should provide safe pedestrian and bicycle access to all land uses of neighborhood and communitywide importance, such as schools, parks, shopping areas, the new library/community center, and the historic Kewaskum CBD. Bicycle parking devices could be provided in the aforementioned locations to help promote the Village as a "bicycle-friendly" as well as a pedestrian-oriented community. As shown on Maps 30, 31, and 33, a network of trails is recommended to

traverse the Kewaskum area, connecting residential areas with each other and with major activity centers and significant natural areas.

Positive Attributes

Although the Village has some urban design problems, it also has many assets. These positive attributes can be enhanced and better utilized to improve the attractiveness of the Village. The growing community with its heavily traveled arterials and such surrounding major attractions as the Sunburst Ski Area, Hon-E-Kor Golf and Country Club, and Kettle Moraine State Forest—Northern Unit, along with the unique natural features of the area, has a high potential to project a very positive image to the public. Indeed, the Village of Kewaskum is promoted as the "gateway" to the Kettle Moraine State Forest. Since Fond du Lac Avenue (USH 45) and Main Street (STH 28) are perceived as the "major" arterials of the Village, they should be provided with good streetscaping features to present a positive image of the Village to people visiting the community. The historic Kewaskum CBD should also be further developed to its full potential as a major focal point for commercial activities in the Kewaskum area. Improvements to such visual elements can be used to create a more pleasant environment in which to live and work.

In addition to the cultural attractions of the area, distinct natural features exist throughout the Kewaskum area. Unique glacial landforms in the area include kames, kettle holes, and eskers in the Kettle Moraine State Forest, along with gently sloping and rolling ground moraines, hills, and naturally attractive vegetation and meandering waterways. The provision of a recommended trail network along a potential interconnecting parkway system, as illustrated on Maps 31 and 33, would connect residential areas to major activity centers and to these unique natural features, thereby providing opportunities for Village residents and visitors to participate in a wide array of distinctive recreational experiences. With prudent planning and effective plan implementation, the identified urban design problems of the area can be resolved and the positive characteristics enhanced. Any revitalization effort, including that for the Kewaskum CBD, should play a significant role in establishing a sense of community identity as well as instill a sense of community pride in Village residents and businesses.

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Chapter IX

PLAN IMPLEMENTATION

The recommended land use and street system plans described in Chapter VIII of this report provide a design for the attainment of the community development objectives set forth in Chapter VI. In a practical sense, however, the plans are not complete until the steps necessary to implement them have been specified. After formal adoption of the development plans, realization of the plans will require faithful, long-term dedication to the underlying objectives by municipal officials concerned with their implementation. Thus, the adoption of the plans is only the beginning of a series of actions necessary to achieve the objectives expressed in this report. The plans should be used as a guide for making decisions concerning land development in the Village and in the planning area. Adjustments to the plans should be made as needed to respond to changing conditions. Consequently, one of the important tasks of plan implementation is a periodic reevaluation and reexamination of the plans to ensure that they continue to reflect current conditions and development objectives properly. It is recommended that this reevaluation and reexamination take place every five years, but more frequently if warranted by changing conditions.

Attainment of the aims of the recommended development plans will require some changes in the development policies of the Village. Since the maintenance of the present character of the Kewaskum area is dependent to a considerable extent upon preserving and protecting the natural resource base, the density of new development should be carefully regulated to ensure that new residential developments at urban densities, that is, at lot sizes generally less than 1.5 acres per dwelling unit or at densities of more than 0.7 dwelling unit per net residential acre, are confined to those areas where urban services can be provided efficiently and economically. Residential development outside the urban service area should be limited to the infilling of existing platted residential lots or to rural lots of five acres or larger per dwelling unit, or at equivalent overall densities, in order to preserve the rural character and setting of the area. Before approval of any new land divisions, the soil maps for areas within the extraterritorial plat review jurisdiction of the Village of Kewaskum, presented in Chapter III of this report, should be carefully reviewed by the affected Towns and by the Village. In addition, urban development outside the Kewaskum planned urban service area should be avoided if it entails converting prime agricultural lands to urban use, encroachment into environmental corridors or other environmentally significant lands, draining and filling wetlands, or grading hilly wooded areas. These policies are central to a sound development strategy for the planning area. In fact, the effectiveness of many of the more specific recommendations of this report will be lost if these policies are ignored or greatly compromised. Development policies and practices that consider the limitations of the natural environment will, in the long term, not only preserve the overall quality of the environment in the Kewaskum area, but will also avoid the creation of serious and costly environmental and developmental problems and will avoid the need to provide costly urban facilities and services over an ever-widening area.

Achievement of the goals of the recommended land use and street system plans for the Kewaskum area will also require the introduction of some, and modification of other, plan implementation tools, including zoning and land division ordinances. Recommended changes to the Village plan implementation tools are described in the following sections.

PUBLIC INFORMATIONAL MEETINGS AND HEARINGS AND PLAN ADOPTION

Enabling legislation for Wisconsin community planning does not require local plan commissions to hold public hearings on proposed plans before their adoption. It is nevertheless good planning practice to hold informational meetings and hearings in order to acquaint residents and landowners with the proposed plans and to solicit public reactions to the plan proposals. The plans should then be modified to reflect any pertinent new information and to incorporate any sound and desirable new ideas advanced at the meetings. Accordingly, a public informational meeting was held on the preliminary recommended plans on June 3, 1997, and a formal public hearing was held on the plans on June 10, 1997. Detailed minutes of these meetings were

recorded by the Village and are on file in the Municipal Building. In part on the basis of comments received at public meetings, the final recommended land use and street system plans presented herein were developed as directed by the Village Plan Commission. These plans were designed to address the concerns raised and to incorporate desirable new ideas advanced at these meetings.

An important step in plan implementation is the formal adoption of the recommended plans by the Village Plan Commission and certification of the adopted plans to the Village Board, pursuant to State enabling legislation. Although formal adoption of the plans by the Village Board is not legally required, this step is recommended to demonstrate acceptance and support by the governing body. Upon such adoption, the plans become the official guide intended to be used by Village officials in making development or redevelopment decisions. The recommended land use and street system plans were adopted by the Village Plan Commission on June 10, 1997, and subsequently adopted by the Village Board on June 23, 1997, as indicated in the resolutions in Appendices C and D, respectively.

ZONING

Of all the land use implementation devices currently available, perhaps the most important and most versatile is the zoning ordinance. Following adoption of the development plans by the Village Plan Commission and certification of the adopted plans to the Village Board, as provided by Section 61.35 and 62.23 of the Wisconsin Statutes, the Village Plan Commission should initiate appropriate amendments to the Village zoning ordinance and zoning district map to bring the ordinance and map into conformance with the concepts and proposals advanced in the adopted development plans. State law requires that a public hearing be held on any proposed amendments to the zoning ordinance. The hearing may, at the option of the Village Board, be held by the Board itself or by the Plan Commission. The latter option is recommended for the comprehensive rezoning of the Village that will be necessary to implement the land use and street system plans.

Certain changes to the Village zoning ordinance are recommended to aid in the implementation of the land use and street system plans. These changes include modifications to the text and districts of the existing zoning ordinance and revisions to the existing zoning district map to reflect plan recommendations.

Zoning Districts and Related Regulations

Map 36 shows the ultimate zoning district map recommended for consideration by the Village to help implement the recommended land use plan as it pertains to the Kewaskum planned urban service area based on buildout conditions. The recommended changes to existing zoning districts and introduction of new zoning districts and related regulations are described below.

Agricultural District and Transportation and Utility Lands District: The existing AG-1 Exclusive Agriculture District and AG-2 Agriculture Related District in the Village of Kewaskum zoning ordinance should be deleted. An A-1 Agricultural and Rural Holding District should be created to provide for the continuation of general farming and related uses in those areas of the Village not yet committed to urban development. This district is also intended to protect these lands from urban development until their orderly transition into urban-oriented districts is required.

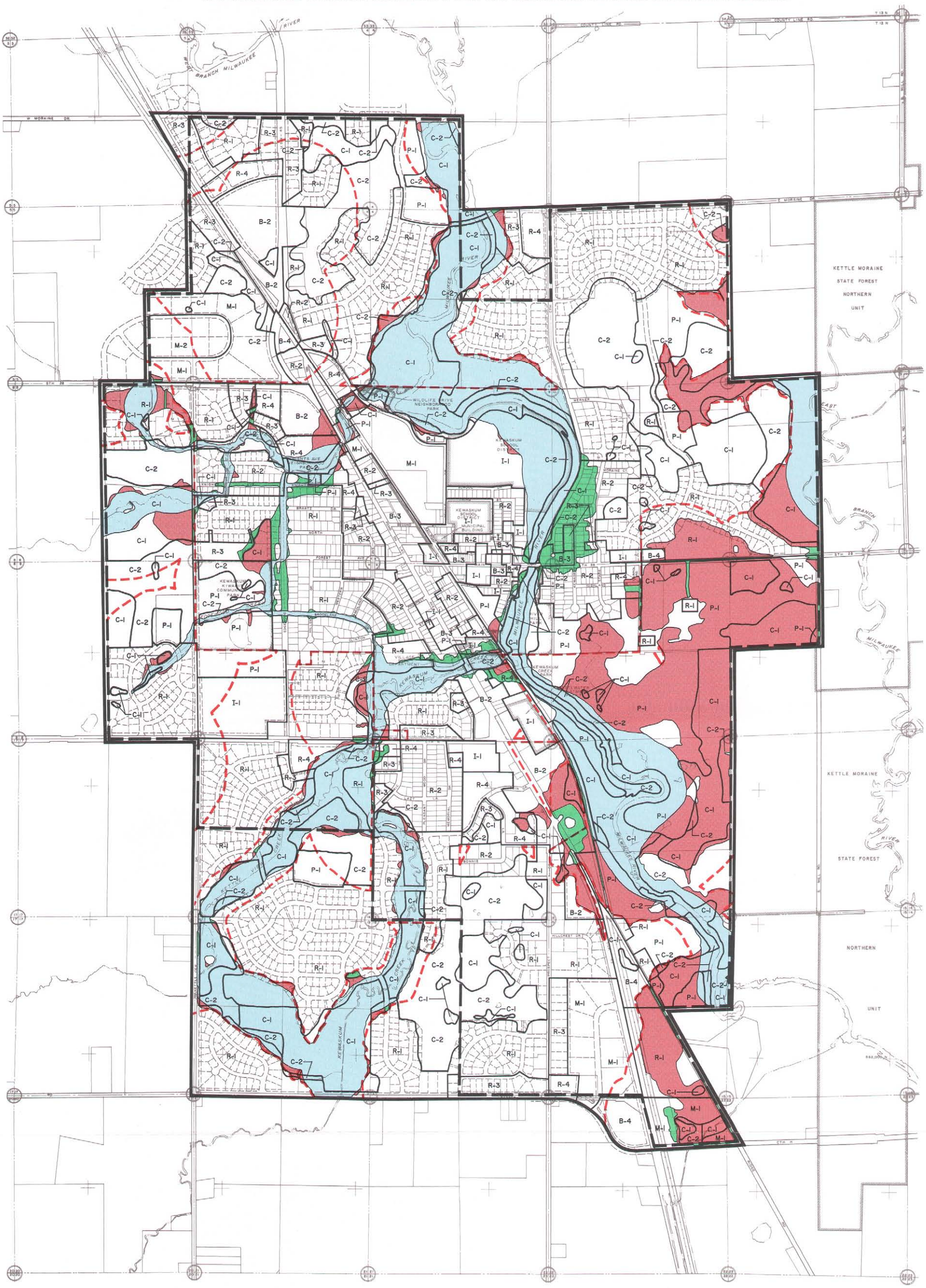
The existing Transportation and Utility Lands District should be deleted. Transportation and utility land uses currently specified under this district should be listed as either permitted or conditional uses under other basic zoning districts.

Residential, Business, Manufacturing, Institutional, and Park Districts: The following districts would be retained: R-1 Single-Family Residence District, R-2 Single-Family Residence District, R-3 Two-Family Residence District, R-4 Multiple-Family Residence District, R-5 Mobile Home Park Residence District, B-1 Limited Retail Business and Services District, B-2 General Retail Business and Services District, B-3 Central Community Business and Services District, B-4 General Business and Warehousing District, M-1 Limited Manufacturing District, M-2 Heavy Manufacturing District, M-3 Extractive District, I-1 Institutional District, and P-1 Park District. Even though these districts and most of their related lot size and yard requirements would remain the same, additional uses may be added and other uses may be changed to permitted or conditional uses during the subsequent zoning ordinance amendment process after the adoption of the land use and street system plans.

Floodplain Overlay Regulatory Areas: Areas regulated by floodplain districts include all lands within the Village that would be inundated by a 100-year recurrence interval flood, or "regional" flood, and would be divided into, and continue to be regulated by, the three existing floodplain overlay areas. Even

Map 36

RECOMMENDED ULTIMATE ZONING MAP FOR THE KEWASKUM PLANNED URBAN SERVICE AREA



LEGEND

- PLANNED URBAN SERVICE AREA BOUNDARY
- VILLAGE OF KEWASKUM PLANNED URBAN SERVICE AREA BOUNDARY: 2010
- SHORELAND BOUNDARY (EXCLUDING SHORELAND AREAS INCORPORATED BEFORE MAY 8, 1982.)
- EXISTING VILLAGE OF KEWASKUM CORPORATE LIMITS: 1992

ZONING DISTRICTS

- ZONING DISTRICT BOUNDARY

RESIDENTIAL DISTRICTS

- R-1 SINGLE-FAMILY RESIDENCE
- R-2 SINGLE-FAMILY RESIDENCE
- R-3 TWO-FAMILY RESIDENCE
- R-4 MULTIPLE-FAMILY RESIDENCE
- NONE MOBILE HOME PARK RESIDENCE

BUSINESS DISTRICTS

- NONE LIMITED RETAIL BUSINESS AND SERVICES
- B-2 GENERAL RETAIL BUSINESS AND SERVICES
- B-3 CENTRAL COMMUNITY BUSINESS AND SERVICES
- B-4 GENERAL BUSINESS AND WAREHOUSING DISTRICT

MANUFACTURING DISTRICTS

- M-1 LIMITED MANUFACTURING
- M-2 HEAVY MANUFACTURING
- NONE EXTRACTIVE

PUBLIC/SEMI-PUBLIC DISTRICTS

- I-1 INSTITUTIONAL
- P-1 PARK

CONVERVANCY DISTRICTS

- C-1 LOWLAND CONSERVANCY
- C-2 UPLAND CONSERVANCY

FLOODPLAIN OVERLAY DISTRICTS

- FLOODWAY REGULATORY AREA
- FLOODPLAIN-STORAGE REGULATORY AREA
- FLOODPLAIN-FRINGE REGULATORY AREA

GRAPHIC SCALE
0 400 800 1600 FEET

Source: SEWRPC.

though the regulations for these regulatory areas would remain the same, the abbreviation for the existing F Floodway Regulatory Area should be changed to FW; the existing FC Floodplain-Conservancy Regulatory Area should be retitled the FS Floodplain-Storage Regulatory Area; and the existing UF Urban Floodplain Regulatory Area should be retitled the FF Floodplain-Fringe Regulatory area for purposes of clarification.

The delineation of the three floodplain regulatory areas was based on the floodplain limits determined in a detailed floodplain analysis conducted by the staff of the Southeastern Wisconsin Regional Planning Commission during the planning process. This analysis further refines the floodplain and/or floodway limits as set forth in the Flood Insurance Study, Village of Kewaskum, Washington County, Wisconsin, published by the Federal Emergency Management Agency (FEMA) on July 6, 1981, and in the Flood Insurance Study, County of Washington, Wisconsin (Unincorporated Areas), also published by FEMA on March 1, 1983. The analysis, which is based on planned full development of the Kewaskum planned urban service area, identifies the floodway and flood-fringe portions of floodplains located along certain tributaries flowing to the Milwaukee River through the Kewaskum planned urban service area. It also extends floodplain delineations along those tributaries to portions of the planned urban service area which are upstream of the location at which the Flood Insurance Study delineations were terminated.

Upon adoption of the recommended land use and street system plans, the Village should submit its proposed floodplain revisions, based on the results of the recent Commission analyses, to the Wisconsin Department of Natural Resources (DNR), requesting revision of the Flood Hazard Boundary Maps by the Federal Insurance Administration. Following DNR and FEMA approval of the floodplain analyses, the Village should amend those portions of its floodplain regulatory areas pertaining to Edgewood, Kettle View, Kewaskum, Knights, and North Creeks, and the Milwaukee River and its East Branch, to reflect the 100-year recurrence interval water surface profile and floodplain and floodway boundaries set forth in the Commission floodplain analysis.

Shoreland Areas and Shoreland-Wetlands: The specific purposes for identifying the shoreland areas in the Kewaskum planned urban service area shown on Map 36 are to prevent and control water pollution; protect spawning grounds, fish and aquatic life; control building sites, placement of structures, and land uses in shorelands; and preserve shore cover and natural beauty. "Shoreland" areas are defined as those lands lying within 1,000 feet of the ordinary high-water mark of natural lakes, ponds, or flowages, or 300 feet of the ordinary high-water mark of navigable rivers or streams or to the landward side of the floodplain, whichever distance is greater. The following areas are recommended to be regulated to protect the shoreland and shoreland-wetland areas within the Kewaskum planned urban service area.

Shoreland-Wetlands: The current shoreland-wetland regulations for the Village of Kewaskum, cited in a document separate from the existing Village of Kewaskum Zoning Ordinance, should be incorporated into the Village Zoning Ordinance. These regulations would continue to regulate wetlands in the C-1 Lowland Conservancy District of five acres or greater in size within the delineated floodplain and shoreland areas shown on Map 36. In cases where the regulations of the shoreland-wetlands conflicts with the other zoning district regulations, the more restrictive regulations would govern.

Shoreland Areas: Section 59.971(7) of the Wisconsin Statutes requires county shoreland regulations to remain in effect in areas annexed after May 7, 1982, unless a city or village has adopted shoreland regulations that are at least as restrictive as the county's regulations. It is recommended that shoreland area regulations be included in the Village of Kewaskum zoning ordinance to regulate shoreland areas incorporated into the Village after May 7, 1982. The Village shoreland provisions should be similar to the shoreland regulations in the Washington County Shoreland and Wetland Zoning Ordinance. Some of the provisions for these areas are minimum lot sizes of 10,000 square feet and a minimum average lot width of 65 feet for sewered lots; 75-foot minimum building setback requirements from the ordinary high-water mark of navigable rivers, streams, and lakes; limitations on the removal of shore cover within 35 feet of the ordinary high-water marks; and restrictions on filling, grading, lagooning, dredging, ditching, and excavating in shoreland areas.

Conservancy Districts: The existing C-1 Conservancy District should be retitled the C-1 Lowland Conservancy District in order to distinguish this district from the new C-2 Upland Conservancy District discussed below. The C-1 District requirements would be retained to preserve, protect, and

enhance such environmentally sensitive lowland areas as the ponds, streams, and wetland areas in the Village of Kewaskum.

The new C-2 Upland Conservancy District is intended to prevent the destruction of valuable natural resources, particularly woodlands, wildlife habitat areas, areas of steep topography, and related scenic areas. Regulating these areas would serve to control erosion and sedimentation, to protect the natural resource base, and to promote and maintain both the natural beauty of the area and the public welfare. This district should have no minimum areal requirements and may permit very-low-density residential development of no more than 0.2 dwelling units per net acre, equivalent to one dwelling unit per five acres or greater, that is carefully integrated with the natural features with minimal disturbance. The district should be used in those parts of the Village with significant combinations of such natural features mentioned above and would basically be applied to areas identified in the adopted land use and street system plans as the upland portions of environmental corridors and isolated natural resource areas. Other environmentally sensitive areas with steep topography adjacent to environmental corridors should also be included in this district, since vegetation may develop on these undisturbed areas during the life of the adopted plans. These vegetated areas may thus be converted to, and reclassified as, environmental corridors.

Planned Unit Development Regulatory Area: A new overlay regulatory area, called the PUD Planned Unit Development Regulatory Area, should be added to the Village Zoning Ordinance. This regulatory area would permit certain zoning requirements to be relaxed in the basic-use district in order to allow flexible design standards for developments that will be enhanced by coordinated site planning, diversified location of structures, and/or mixing of compatible land uses. Such developments are intended to provide a safe and efficient system for pedestrian and vehicle traffic; to provide attractive recreation and, ultimately, preserved open spaces as integral parts of the developments; to facilitate the economic development of public and private utilities and community facilities; and to ensure adequate site development standards. In contrast to the other zoning overlay regulatory areas, lands should not be prezoned into the PUD Regulatory Area until detailed site development plans for the parcel(s) in question have been prepared by the developer.

Site, Landscape, and Architectural Plan Review and Regulations

The good appearance and proper design of urban developments within the Village, consistent with the urban design guidelines outlined in Chapter VI, will ensure an attractive community and help stabilize or increase property values, benefitting both the community and the individual property owner. To achieve this objective, the zoning ordinance should contain requirements for submittal of development plans and include requirements for the provision of detailed information pertaining to the site, landscaping, and architectural elements of a development or redevelopment plan. Site plan submittal requirements should be included in the zoning ordinance, listing specific types of information that shall be provided on a site plan to allow local officials to review development and redevelopment proposals within the Village urban service area properly. Site plans should be required to be submitted for such proposed urban developments as multi-family residential, commercial, manufacturing, recreational, and institutional developments.

To ensure that the built environment will foster the attractiveness of the community as a place to live and work, the Village of Kewaskum zoning ordinance should establish specific minimum landscape requirements and architectural provisions or guidelines that are at least consistent with the urban design standards set forth in Chapter VI.

The zoning ordinance should contain specific provisions requiring landscape plan submittal and also define the amount of landscaping to be provided for proposed urban development and redevelopment projects. Minimum landscape requirements should be established for, but not limited to, building foundation planting, advertising sign landscaping, parking lot screening, screening of dumpsters, interior parking lot landscaping, and perimeter and buffer yard landscaping.

The attractiveness of the architectural features in a built environment is just as important as the beauty of its natural features. Provisions for architectural control within the Kewaskum Central Business District (CBD) could be incorporated into the Village zoning ordinance by means of architectural requirements and review guidelines based, in part, on the architectural design guidelines set forth in Chapter VI and in the basic architectural review guidelines set forth on Appendix B. If the Village does not wish to require, but to encourage, architectural

compatibility within the Kewaskum Central Business District as well as the rest of the Village, a separate document containing detailed architectural or building improvement guidelines could be prepared to supplement the zoning ordinance. These guidelines would help assure respect for, and reduce incompatible and adverse impacts on, the visual experience in a community without stifling innovative architecture, especially in the Kewaskum CBD, which appears to contain a high concentration of potentially historically significant buildings, as discussed in Chapter IV. It should be noted that the Wisconsin enabling legislation requires municipalities, such as cities and villages, to enact a historic preservation ordinance to regulate any property that is listed on the National Register of Historic Places in Wisconsin or the State register, as discussed later.

A detailed analysis of the existing zoning ordinance should be conducted to determine its deficiencies in systematic implementation of the urban design elements of the adopted land use and street system plans. The Village of Kewaskum has expressed interest in amending the current zoning ordinance to include such provisions in the ordinance to better guide the Village in the review of proposed building plans, as well as related site and landscape plans.

LAND DIVISION REGULATIONS

The adopted land use and street system plans should serve as a basis for the review by appropriate Village officials of land subdivision plats and certified survey maps for areas in the Village and the Village's extraterritorial plat approval jurisdiction. Land divisions that propose to create lots smaller than five acres, or equivalent density, should not be approved outside the urban service area. Any such proposed departures from the plans should be carefully considered by the Village Plan Commission and should be allowed by that Commission only when it finds that such departures are warranted in the public interest. All urban subdivisions should be required to provide for a full complement of urban services.

The Village land subdivision ordinance, set forth in Chapter 18 of the Municipal Code, contains some deficiencies. These deficiencies can be corrected through the amendment of the existing ordinance by revising the street and pedestrian design requirements so that they are consistent with those established in Chapter VI, including the minimum dimensions shown in Figure 4 of that chapter. Adding a provision that allows the Village to require additional lot depth to accommodate a minimum 30-foot wide landscaped strip for those lots abutting limited-access highways or railroads for noise attenuation and buffering; requiring an additional lot width of at least 15 feet for corner lots to permit adequate building setbacks from side streets; requiring vision triangular clearance areas and deed restrictions to be provided on the plat; and adding a provision that requires the subdivider to install one street tree for every 50 feet of public street frontage in the tree bank of an urban street would also improve the ordinance.

OFFICIAL MAPPING

Sections 61.35 and 62.23(6) of the Wisconsin Statutes indicate that the village board of any village may establish an official map for the precise identification of right-of-way lines and site boundaries of streets, highways, waterways,[1] and parkways and the location and extent of railroad rights-of-way, public transit facilities, and parks and playgrounds. The official map, which has the force of law and is deemed to be final and conclusive, is intended to be used as a precise planning tool for implementing public plans for the aforementioned features.

One of the basic purposes of the official map is to prohibit the construction of any structures and their associated improvements on land that has been designated for future public use. The official map is a plan implementation device that operates on a communitywide basis in advance of land development and can thereby effectively assure the integrated development of the street and highway system. Unlike subdivision control, which operates on a plat-by-plat basis, the official map can operate over the entire Village in advance of development proposals. The official map is a useful device to achieve public acceptance of long-range plans in that it serves legal notice of the government's intention to all parties concerned well in advance of any actual improvements.

The Village of Kewaskum should prepare and adopt an official map and ordinance for the Village and contiguous area. The map should identify existing property lines, railroad and street right-of-ways, waterways, parkways, and the future location and extent of railway rights-of-way, street rights-of-

[1]*Waterways may be placed on the map only if included within a comprehensive surface water drainage plan.*

way, public school sites, public transit facilities, and parks and playgrounds. This map would facilitate the proper implementation of the adopted land use and street system plans. A more complete description on the functions and benefits of official mapping and on the preparation necessary for creating such maps along with a model official map ordinance can be found in SEWRPC Planning Guide No. 2 (2nd Edition), Official Mapping Guide, June 1996.

IMPACT FEE ORDINANCE

Section 66.55 of the Wisconsin Statutes enables cities, villages, towns, and counties to impose impact fees on certain developments. An impact fee ordinance is a legal tool used by a community for financing offsite public facilities and services. The impact fees or charges as outlined in the ordinance are levied by local governments against developers for their pro rata share of the capital funding for public facilities and services necessitated by new development. Impact fees serve to shift the burden of the cost of providing new and expanded offsite facilities from the general public to the land developers who create the need for the facilities.

Impact fees can be used to help promote community development by providing municipalities with the opportunity to expand the existing public facility system capacity while maintaining a level of services compatible with the objectives of the community. Local facilities and services which have been financed through impact fees include water and sewer facilities, parks, libraries, roads, and police and fire-protection services. Impact fees can also restrict the development of a community, particularly in a metropolitan area where other communities may not impose such fees.

Any proposed impact fee system should be based on a capital improvements program. A sound impact fee system should relate the system to land use and transportation system planning, defining and evaluating public facility service needs, identifying the geographic area for the impact fee ordinance, analyzing the type of development to which impact fees will be applied, measuring and pricing individual impacts of each development, administering impact fee revenues, and administering impact fee expenditures.

CAPITAL IMPROVEMENTS PROGRAM

A capital improvements program consists basically of a list of fundable major public improvements needed in a community over a short-term period, such as the next five years, arranged in order of priority of need and adjusted to the community's ability to finance them. Major public improvements include such items as streets, sanitary sewers, storm sewers, water mains, and public buildings and parks, which together form the "urban infrastructure" required to support urban land use development and redevelopment. A capital improvements program is intended to promote well-balanced community development without overemphasis on any particular phase of such development and to promote coordinated development both in time and between functional areas. With such a program, required bond issues and tax revenues can be foreseen and provisions made. Land needed for the projects can be acquired in a timely fashion and staged construction facilitated.

It is recommended that those elements of the plans requiring public expenditures for implementation, including streetscaping and revitalization projects, be included the Village's five-year capital improvements program.

THE NEED FOR A COMPREHENSIVE RECREATION TRAIL AND BIKEWAY FACILITY SYSTEM PLAN

As noted in Chapter VIII, a detailed recreation trail and bikeway facility system plan should be prepared by the Village. The plan would serve as a refinement of the bikeway plan shown on Map 30 and the recreation trail plans shown on Maps 31 and 33 in Chapter VIII. The detailed facility plan would also serve as a refinement of the regional bicycle way system plan prepared by the Southeastern Wisconsin Regional Planning Commission as shown in Map 21 of Chapter V for the Kewaskum planning area. These trail-oriented facilities should ultimately assist in connecting, and providing safe convenient access to, significant man-made and natural features of the planning area for both recreational and transportation purposes. Such facilities will further help reduce air pollution, reduce energy consumption, encourage outdoor recreational pursuits, improve public health, reduce transportation costs, and provide for convenient travel between residential areas and support facilities of neighborhood and communitywide importance, such as schools, parks, the library/community center, shopping centers, and employment areas.

The detailed facility plan should not only identify which segments of a trail should be used for certain

recreational activities, such as hiking, cross-country skiing, or biking, but should also provide specific design standards. Design guidelines may include minimum easement or right-of-way widths, type of pavement surface and base, minimum pavement and shoulder widths, type of signage, construction cost, and other related information. The bicycle facility aspects of the plan should distinguish which bikeways should consist of paths separate from street pavements, paths located on street pavements with identified bicycle lanes on each side, or "shared roadways," signed bicycle routes with no delineated bike lanes on streets that contain wide curb lanes or paved shoulders and have low traffic speeds and volumes. A bicycle facility system should be planned in a comprehensive and continuous, rather than a piecemeal, fashion. For example, it is important to provide continuity and consistency in the type of bikeway facility provided instead of switching from short segments of bike lanes to wide curb lanes and back to bike lanes on the same street. All proposed trail-oriented facilities should be further based on engineering standards and specifications and, hence, site-specific engineering studies prior to development.

To establish recreational trails and bikeways without careful study could be very costly. Completion of an overall plan reduces needless duplication and improves overall efficiency and helps in the decision-making process as a point of departure in determining the necessary easement or right-of-way widths needed to accommodate such facilities adequately. Not only will the plan help the Village channel local funds efficiently, but it will also enable the Village to qualify for potential government assistance programs and fundings. The detailed plan should provide safety measures as well as construction measures that should be implemented to ensure public safety and enjoyment.

THE NEED FOR REVITALIZATION AND HISTORIC PRESERVATION PLANNING

The significant number of potential historic places in the Village of Kewaskum, as shown on Map 15 in Chapter IV, indicates that the area may be rich in historic resources. To a large extent, individual owners have sensitively preserved or rehabilitated many of these potential historic buildings and, in other cases, some buildings have been demolished, as noted in Chapter IV. In spite of this activity devoted to historic preservation, there is still a need for additional action in the preservation and enhancement of Kewaskum's historic heritage to prevent disrepair of historic structures or further demolition, as noted above, to the maximum extent possible. As indicated in Chapter IV, no known formal historical survey has been undertaken for the Kewaskum planning area.

A complete communitywide historical survey is the means by which a community such as Kewaskum examines itself in order to identify its unique historic heritage. Such a survey collects, organizes, documents, and photographs historical data and serves to make the community more aware of the value of preserving its past. A survey of this type is needed for the Kewaskum planning area, as evidenced by findings in Chapter IV. It is recommended that a complete and uniform historical survey, of the nature described and in conformance with accepted national standards be conducted by the community with assistance and guidance from qualified consultants and the Historic Preservation Division of the State Historical Society of Wisconsin at Madison. The study should also examine the potential for nomination of places and, if any, a historic district to the National and State Register of Historic Places. It is important to note that Section 62.23(7) of the Wisconsin State Statutes requires any property in a city or village that is listed on the national register of historic places in Wisconsin or the state register of historic places must enact an ordinance to regulate any place, structure, or object with a special character, historic, archaeological or aesthetic interest, or other significant value, for the purpose of preserving the place, structure, or object and its significant characteristics.[2] Stewardship of historic buildings in the Village should be a high priority of both the public and private sectors.

It appears that a large number of potentially historic buildings are located within the Kewaskum CBD, thereby contributing to the unique character of the Village. The Village should enhance this character by revitalizing the Kewaskum CBD and its environs. Detailed plans for subareas and specific development and redevelopment recommendations with attendant business market analyses, structural condition surveys, and site- or building-specific improvement designs should be prepared for the District. Such plans should encompass a detailed streetscape plan that includes, but is not limited to, proposed street lighting and tree plant-

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[2]*A Model Historic Presentation Ordinance, 1992, was published by, and is available from, the State Historical Society of Wisconsin, Division of Historic Preservation in Madison.*

ings along the arterials with strategically situated ornate benches and planters. In addition, the detailed urban design plans for creating a uniquely identifiable "historic downtown area" will signify further that one is in the Village of Kewaskum. The detailed plans should include building-specific proposals for preserving or restoring potential historic buildings. Possible streetscape and building improvements for the historic Kewaskum CBD and environs are illustrated in Figures 34, 35, 36, and 37 in Chapter VIII.

Further analyses should be conducted before implementing any revitalization projects. The urban design plans should be of a very high level of specificity, including more detailed development or redevelopment proposals, such as those for buildings, signs, on- and off-street parking areas, sidewalks, landscaping, and necessary offsite traffic improvements, than would a general development plan as shown on Map 35 in Chapter VIII. The preparation of precise urban design plans for the revitalization of this area will serve to refine and further detail the urban design element of the recommended land use and street system plans, discussed in Chapter VIII. Recommendations on how to implement various plan proposals should also be provided, including the use of tax incremental financing districts and the establishment of a central business district development corporation.

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Chapter X

SUMMARY

In 1992, the Village of Kewaskum requested that the Southeastern Wisconsin Regional Planning Commission assist the Village in preparing a land use plan and a street system plan. The plans were to provide local officials with tools to help guide and shape land development and redevelopment in the Kewaskum area. This report sets forth the findings and recommendations of the planning effort undertaken in response to that request. The plans, together with supporting implementation devices, provide an important means for promoting the orderly growth and development of the Village of Kewaskum and environs in the public interest.

The planning effort involved extensive inventories and analyses of the factors and conditions affecting land use development within the Kewaskum area, including existing and probable future resident population, household, and employment levels; the natural resource base; existing land uses; and existing local plan implementation devices. The effort also involved the formulation of a set of development objectives and supporting standards for the Kewaskum area and the preparation of a land use plan and a street system plan which could accommodate the forecast population, household, and employment levels while meeting the agreed-upon development objectives. The plans also include specific urban design guidelines and a set of recommended measures to help carry out the plans over time. The findings and recommendations of the planning effort are summarized below by chapter.

CHAPTER I: INTRODUCTION

Chapter I defines and briefly describes the planning area, its early history, the purpose of the planning efforts, and the procedure used to prepare the land use plan and the supporting street system plan. The planning area was defined as an approximately 24.3-square-mile area encompassing the Village proper and the Town of Kewaskum. Much of the Town lies within the 1.5-mile extraterritorial plat approval jurisdiction of the Village, which was incorporated on May 7, 1895.

CHAPTER II: POPULATION AND EMPLOYMENT INVENTORIES, ANALYSES, AND FORECASTS

Chapter II provides information on the size, characteristics, and distribution of the resident population, households, and employment in the Kewaskum planning area and on anticipated changes in these important socio-economic factors over time. This information is essential to the preparation of a sound community land use plan and street system plan, since the expected number of residents and workers in the urban service area directly influences the amount of land needed for the various types of land uses. The primary purpose of the plans is to meet those needs in an environmentally sound and efficient manner.

Population and Employment Forecasts

The forecasts of population, household, and employment levels, as well as related land use requirements, used in the planning for the Kewaskum area were initially based upon consideration of alternative population, household, and employment projections developed at the regional level to the design year 2010. A range of alternative projections were considered, with "high-growth" and "low-growth" future scenarios identifying the reasonable extremes and the "intermediate-growth" scenario identifying a most probable future between the extremes. An additional variable, referred to as centralized and decentralized population distributions, which deals with the degree of centrality of incremental urban land use development as measured by the relative nearness of new urban land uses to the major population centers of the Region, was added to the analysis of each scenario. In reviewing these alternative projections and noting historic and current trends in population, household, and employment levels for the area, the intermediate future growth scenario with a decentralized development pattern was selected by the Village to be used in the planning effort.

Under the selected intermediate-decentralized scenario, the population in the urban service area

would be expected to increase from about 2,510 persons in 1990 to about 4,060 persons by 2010, an increase of about 1,550 persons, or over 60 percent. The total number of housing units, based on the selected scenario, may be expected to increase from about 940 units in 1990 to about 1,690 units by 2010, an increase of about 750 units, or about 80 percent. The number of jobs under this selected scenario would be expected to increase from about 1,540 jobs in 1990 to about 2,290 jobs by 2010, an increase of about 750 jobs, or about 50 percent.

Age Distribution and Household Size

Changes in the age composition of the resident population have important implications for land use and housing planning. Within the Kewaskum planning area, for instance, the selected scenario anticipates that the school-age population, children in the five-to-19-year age group, may be expected to increase through the year 2010, which in turn may be expected to create a need for additional educational facilities as well as ancillary recreational facilities. Similarly, under the selected scenario, the expected rise in the working-age population, 20 to 64 years of age, by about 770 persons, or about 37 percent over 1990 labor force level, indicates a potential significant rise in the number of job seekers and the need for land and infrastructure suitable for commercial and industrial development within the urban service area. Finally, the selected scenario indicates a dramatic increase of about 60 percent over the 1990 level of population 65 years of age and older. The general aging of the population may be expected to affect the demand for housing units and special transportation and health care services for the elderly within the Kewaskum planning area.

In 1990, the average household size in the Village of Kewaskum urban service area was about 2.72 persons. Under the selected scenario, this average may be expected to decrease to about 2.40 persons by 2010.

CHAPTER III: NATURAL RESOURCE BASE INVENTORY AND ANALYSIS

The natural resources of the Kewaskum area are unique and vital to its ability to provide a pleasant and habitable environment for human life. Natural resources not only condition, but are conditioned by, urban growth and development. Any meaningful planning effort must, therefore, recognize the existence of a limited natural resource base to which urban development must be properly adjusted if serious environmental and urban development problems are to be avoided.

Chapter III describes the principal elements of the natural resource base, which require careful consideration in any sound land use planning effort. These elements include physiography and associated topographic and soil characteristics; water resources, including watershed boundaries, lakes, streams, and associated floodlands and wetlands; woodlands; prime agricultural lands; and climate. Related elements, such as scenic overlooks; natural areas of scientific value; and parks, scenic drives, trails, and other recreational sites, were also considered. One of the basic objectives of the plans is to avoid urban development in areas containing high-value natural resources, particularly those areas identified as primary environmental corridors and in areas having poor soils, steep slopes, or floodlands, where development would be costly and subject to potential hazards. Such areas should be preserved in essentially natural, open uses during the life of the plans and beyond.

Soil Suitability

Soil properties exert a strong influence on the manner in which people use land. Soil suitability maps of the Kewaskum area were prepared and analyzed, identifying soil limitations for urban development with and without sanitary sewer services. About ten square miles, or about 41 percent, of the total 24.3-square-mile planning area are covered by soils that are unsuitable for the use of conventional onsite sewage-disposal systems. About 6.9 square miles, or about 28 percent, of the total planning area are covered by soils that are unsuitable for the use of mound onsite sewage-disposal systems. In general, intensive urban development should not be permitted in areas covered by soils unsuitable for either conventional or mound systems unless public sewerage facilities are provided.

Prime Agricultural Lands

The rapid conversion of farmland to urban use has become a matter of increasing public concern. Prime agricultural lands are an important component of the natural resource base and, as such, should be preserved and protected whenever possible. In 1981, after the enactment of the Wisconsin Farmland Preservation Act, the Washington County Board of Supervisors adopted a farmland preservation plan for Washington County. This plan was intended to serve as a guide to the preservation of both agricultural lands and environmental corridors within

the County. Prime agricultural lands in the planning area, defined in the County plan as lands covered by soils well suited for agricultural production and in parcels of 35 acres or more in area encompassed about 7.2 square miles, or about 30 percent, of the total planning area in 1990.

Floodlands

The floodlands of a stream are defined as the wide, gently sloping areas contiguous to, and usually lying on both sides of, the stream channel which are periodically inundated by flood flows. For planning and regulatory purposes, floodlands are normally defined as the areas, excluding the channel surface area, subject to inundation by floods up to and including the 100-year recurrence interval flood event. Floodland areas are generally not well suited to urban development, not only because of the flood hazard, but because of the presence, usually, of high water tables and of soils poorly suited to urban use. The floodland areas, however, often contain important elements of the natural resource base, such as high-value woodlands, wetlands, and wildlife habitat and, therefore, constitute prime locations for needed park and open space areas. Every effort should be made to discourage urban development on floodlands while encouraging compatible park and open space use. Floodlands in the Kewaskum planning area in 1990 encompassed about five square miles, or 20 percent, of the planning area, excluding approximately 120 acres of surface water areas in lakes and stream channels.

Wetlands

Wetland areas are generally unsuited, or poorly suited, for most agricultural or urban development. Wetlands, however, have important recreational and ecological values. Wetlands contribute to flood control and water quality enhancement, since such areas naturally serve to store excess runoff temporarily, thereby tending to reduce peak flows and to trap sediments, nutrients, and other water pollutants. Additional important natural functions of wetlands include the provision of breeding, nesting, resting, and feeding grounds and predator escape cover for many forms of wildlife and of groundwater recharge and discharge. Wetlands encompass approximately 3.8 square miles, or 15 percent, of the planning area.

Primary Environmental Corridors

Primary environmental corridors are defined by the Regional Planning Commission as linear areas in the landscape, at least 400 acres in size, two miles in length, and 200 feet in width, encompassing concentrations of high-value elements of the natural resource base. As already noted, the protection of these corridors is one of the more important objectives of the plan. In 1990, primary environmental corridors covered about 8.9 square miles, or 37 percent, of the total planning area. These corridors appear throughout the Kewaskum planning area, generally along perennial and intermittent watercourses such as the Milwaukee River and its tributaries. They include the large wetland and floodland complexes associated with these streams.

The primary environmental corridors contain the best remaining woodlands, wetlands, and wildlife habitat areas in the planning area, as well as undeveloped floodlands, groundwater recharge and discharge areas, and areas covered by organic soils. These corridors have immeasurable environmental and recreational value. Their preservation in an essentially open, natural state, including park and open space uses and very-low-density residential uses, will serve to maintain a high level of environmental quality in the area, protect its natural beauty, and provide valuable recreational opportunities. Such preservation will also help prevent serious and costly environmental and developmental problems attendant to the urban development of the corridors, such as flood damage; poor drainage; wet basements; excessive infiltration of clear water into sanitary sewers; water pollution; and failing foundations of walls, buildings, roads, and parking areas.

Secondary Environmental Corridors

Secondary environmental corridors within the planning area, while not as significant as the primary environmental corridors in terms of the overall resource values concerned, should be preserved in essentially natural, open uses to the extent practicable as urban development within the planning area proceeds. Maintenance of such corridors in open uses can facilitate drainage, provide wildlife travel routes through residential and agricultural areas, maintain "pockets" of natural resource features, and serve as sites for parks. Such corridors are, by definition, at least 100 acres in size and one mile in length, except there are no size requirements for those secondary corridors linked to, or connecting, segments of primary environmental corridors. As of 1990, about 300 acres, or 2 percent, of the planning area were classified as secondary environmental corridors. These corridors are generally located along perennial and intermittent streams or serve as links to primary environmental corridors.

Isolated Natural Resource Areas

Isolated natural resource areas generally are areas containing natural resource base elements such as wetlands, woodlands, wildlife habitat areas, and surface water, but are separated from the primary and secondary environmental corridors by intensive urban or agricultural land uses. Since isolated natural resource areas may provide the only available wildlife habitat in an area, provide good locations for local parks, and lend natural diversity to an area, these areas should also be protected and preserved to the extent practicable. Isolated natural resource areas of five acres or more in size totaled about 100 acres, or 1 percent, of the total planning area in 1990.

CHAPTER IV: LAND USES, COMMUNITY FACILITIES, AND PUBLIC UTILITIES

If the land use and street system plans are to constitute sound and realistic guides to making decisions concerning the physical development of the Village and environs, they must be based upon careful consideration of pertinent features of the built environment as well as the natural features of the area. For the purposes of this planning effort, the pertinent existing features of the built environment were identified in Chapter IV as: 1) land uses, 2) historic places, 3) community facilities, and 4) public utility systems. Each of these features is described in that chapter as it affects the physical development of the Village and environs.

Existing Land Uses

The Regional Planning Commission conducts detailed inventories of existing land use within the Region approximately every five years. In 1992, a special field survey was conducted by the Commission to update the 1990 inventory for the Kewaskum planning area in order to determine the current type, amount, and spatial distribution of the existing urban and rural land uses in the planning area. This information was mapped and analyzed in order to provide a basis for determining probable land use requirements in the year 2010 and to assist in the design of an appropriate pattern of future land use development in the planning area.

Of the approximately 24-square-mile planning area, about two square miles, or 10 percent, of the total planning area, were occupied by urban land uses. Nonurban land uses, which include water, wetlands, woodlands, agricultural lands, and undeveloped lands, occupied about 22 square miles, or 90 percent of the total planning area. In 1992, the incorporated Village of Kewaskum occupied about 1.4 square miles, or 6 percent of the total planning area. Urban land uses occupied about 522 acres, or 60 percent of the total area within the corporate limits of the Village; nonurban land uses occupied about 350 acres, or 40 percent of the area within the corporate limits.

Several important elements of the character of the planning area may be noted. First, the largest single group of land uses in the planning area in 1992 was still agriculture-related uses, representing about 51 percent of the total planning area. The next largest group was natural areas and other undeveloped open lands, including water, wetlands, and woodlands, occupying almost 39 percent of the total planning area. Third, residential and transportation and utilities land uses each represented about 3 percent of the total planning area.

CHAPTER V: PLANS AND LAND USE REGULATIONS

Land use development can be guided and shaped in the public interest through local and regional planning efforts and sound application of public land use controls. Chapter V describes the findings and recommendations of past local and regional planning documents related to the Kewaskum planning area. Existing land use regulations in effect in the planning area were also examined in this chapter as they relate to the physical development of the Village of Kewaskum and environs and to the ability of the Village and other affected local governments to implement the adopted land use and street system plans. The most important of the regulations considered were the comprehensive zoning and land division control ordinances.

Zoning Ordinances

Zoning ordinances and related zoning district maps within the planning area in 1993 included the Village of Kewaskum shoreland-wetland zoning ordinance and basic zoning ordinance and attendant map, the zoning ordinance and map of the Town of Kewaskum, and the Washington County floodplain zoning ordinance and shoreland and wetland zoning ordinance and maps.

Land Division Ordinances

Land division within the planning area is regulated by several ordinances. The Village of Kewaskum land division control ordinance covers land within the corporate limits of the Village and also within the extraterritorial plat approval jurisdiction of the Village, which extends up to one and one-half miles beyond the corporate limits. The Town of Kewas-

kum, which is also located within the planning area, also has a land division control ordinance. In addition, Washington County has an ordinance regulating land divisions in unincorporated areas of the County. Each of these land division control ordinances contains design standards and prescribes specific data to be provided on all preliminary plats, final plats, and certified survey maps.

CHAPTER VI: OBJECTIVES, PRINCIPLES, STANDARDS, AND DESIGN GUIDELINES

Chapter VI of this report sets forth a recommended set of development objectives, principles, standards, and related urban design guidelines. The objectives are intended to express the long-term physical development goals of the Village of Kewaskum. The principles are intended to assert the validity of the objectives. The supporting standards perform a particularly important function in that they form the basis upon which community land use needs are based. These guidelines deal primarily with: 1) the allocation of land to the various land uses, 2) the spatial distribution of the various land uses, 3) the protection of the natural resource base and agricultural lands of the area, 4) the provision of adequate outdoor recreational opportunities, 5) the provision of an integrated transportation system, 6) the provision of high-quality fire protection services, 7) the provision of adequate library facilities and services, 8) the provision of an adequate variety of housing types, and 9) the preservation of the historical heritage of the Kewaskum area.

Design guidelines were also developed for basic urban and site design and central business district design. These guidelines are intended to be used by architects, landscape architects, planners, engineers, and surveyors in land subdivision and site planning and by public officials in evaluating development and redevelopment proposals, including related site, landscaping, and building plans.

CHAPTER VII: YEAR 2010 LAND USE AND COMMUNITY FACILITY REQUIREMENTS

As part of the planning process, the standards listed in Chapter VI, together with the selected forecast population, household, and employment levels presented in Chapter II, were used to estimate the land use requirements to be met in the plan design. The urban land use and community facility requirements thus developed for the urban service area and used in the land use plan design process are described in Chapter VII.

Land Use Requirements

The land use requirements of the probable future resident population, household, and employment levels of the urban service area were determined by applying two basic types of standards: land use allocation standards and accessibility standards. The land use allocation standards, which are set forth in Chapter VI, were used to estimate the number of acres of each major land use category expected to be needed to serve the resident population and economy of the planning area by the year 2010. Accessibility standards, also set forth in Chapter VI, are expressed as service radii for certain sites, land uses, or facilities, and were intended to assure that such sites, land uses, or facilities are spatially distributed in an efficient manner convenient for use by the resident population and the economic activities which they are intended to serve. Both the land use allocation standards and the accessibility standards were embodied in the recommended plans presented here. It should be recognized that in some situations, although the land use allocation standards may be met, additional sites or facilities may be needed because of the relative inaccessibility of an existing use or facility for some of the resident population in the Village and environs.

This chapter summarizes future urban land use requirements for the Village urban service area by the year 2010. An estimated 340 acres of rural and other open lands in the Kewaskum area will need to be converted to urban use by the year 2010 to meet the forecast population, household, and employment levels at the specified standards. The 1990 housing mix within the Village is compared with the recommended housing mix for the year 2010. The proportion of each residential land use category to be allocated in order to meet the recommended housing mix is also indicated.

Transportation System Requirements

The arterial street and highway network required to serve the existing and probable future traffic demands within the Kewaskum planning area to the year 2010 was based upon the adopted 2010 regional transportation system plan for Southeastern Wisconsin. This plan identifies the jurisdictional responsibilities of the State, the County, and local municipalities for the construction, maintenance, and operation of arterial streets and highways. The map also indicates, for each arterial street segment, the number of traffic lanes in the Kewaskum planning area needed to carry the anticipated arterial traffic volumes to the year 2010.

The recommended land use plan and street system plan presented herein incorporate the recommendations of this regional transportation system plan. Suggested cross-sections for the arterial streets and highways of the planning area are shown in Chapter VI. The recommended plans also address the existing and potential use of mass transportation facilities in the area, including railroad services and parking areas for commuter park-and-pool facilities and the use of pedestrian, bicycle, and recreational trial facilities, based, in part, on the adopted 2010 regional bicycle and pedestrian facilities system plan for Southeastern Wisconsin, as shown in Chapter VI, for the Kewaskum planning area.

Community Facility Needs

In addition to providing general guidelines for land use development within the Kewaskum planning area, the land use plan is intended to provide guidance concerning land requirements for certain community facilities. Accordingly, estimates of land requirements are presented in Chapter VII for public schools, for the Village Hall, for the public library, and for fire stations. Further in-depth studies of the requirements for each of these community facilities will be necessary prior to any expansion to validate and refine the preliminary requirements set forth in Chapter VII. Assessments of the long-term qualitative and quantitative needs for these facilities should be conducted at least once every 10 years or more frequently in order to consider and reflect changing conditions.

Public Schools: The approximately 24-square-mile Kewaskum planning area lies entirely within the approximately 142-square-mile Kewaskum School District. The future Village of Kewaskum urban service area may be expected to lie entirely within this District and, therefore, any educational facility expansion planned for the Kewaskum School District to meet Village and environs needs may be expected to occur within the planned urban service area. Chapter II provides a range of estimated population levels for the school-age population, ages five to 19, in the Kewaskum planning area and the Village urban service area. Based upon the capacity of existing schools and other factors, there may be a need for additional educational and attendant recreation facilities at all grade levels within the planning area if the future student population reaches the higher end of the forecast range.

During the planning process, the Kewaskum School District was conducting a school facility study to consider options that go beyond the recent remodeling and renovation of the interior of both the Kewaskum High School and Middle School. The options remaining under consideration late in 1996 include remodeling the existing Kewaskum Elementary School, replacing that school on the present site, or relocating the school to the Middle School site. In addition, the School District continues to study options addressing both the short-term, five years, and long-term needs for future school facilities. Any comprehensive study undertaken by the School District should be conducted within the framework of the land use and street system plans for the development of the Village and in cooperation with local government officials and planning agencies.

Village Hall and Governmental Offices: The present Municipal Building, located at 204 First Street, accommodates the police department, library, administrative offices, Village Board chambers, and a community room. The Village is contemplating the relocation of the library and/or community room to the old Sentry Food Store site purchased by the Village, which would free space for any future expansion needed. Except for the library and/or community room, the Village anticipates that the existing governmental operations will continue on this premise to the year 2010. The Village Plan Commission determined, however, that the amount of parking space on the site and nearby is inadequate for meeting future parking demand. It may be necessary to expand the site to the north and east in order to provide additional parking spaces. It is recommended that the Village retain a consultant to further study the future spatial needs and desirable arrangement of the Village governmental activities on the current site prior to any expansion activities.

Public Library: The future spatial needs of the Kewaskum Public Library, located in the Municipal Building, were also analyzed. Since the size of, and the number of books in, the current library were in 1993 below the minimum library standards provided in Chapter VI and VII, the library should be expanded during the planning period. As noted earlier, the Village purchased the old Sentry Food Store site for potentially accommodating a library and/or community center that could also function as a multipurpose building for other types of activities, such as shows, meetings, and classes. The Village expressed a need for a larger community room, which could be accommodated on this site. Because of the various factors that may affect the spatial requirements, the Village, in cooperation with the Village Library Board and other community-

oriented committees, should conduct a comprehensive study to definitively determine the future spatial needs for both a community library and a community center.

Fire Stations: The large concentrations of existing urban developments and the future urban developments that may occur within the adopted sanitary sewer service area will lie largely within 1.5 "road miles," length of streets and response distance lines, from the existing engine company as recommended by the Insurance Services Office. It appears, therefore, that the current location of the Village of Kewaskum Fire Department, at 1106 Fond du Lac Avenue (USH 45), is ideal to serve urban development within the Kewaskum planning area to the year 2010.

CHAPTER VIII: THE LAND USE AND STREET SYSTEM PLAN

Chapter VIII presents a recommended land use plan for the Kewaskum planning area including the Village of Kewaskum planned urban service area. The plan sets forth specific recommendations concerning the type, amount, and geographic location of the various land uses for the Kewaskum area.

The recommended plan represents only one of many possible patterns of land use development that could accommodate the future physical, social, and economic needs of the residents of the Village of Kewaskum and environs through and beyond the plan design year 2010. The selection of the plan involved the comparative evaluation of land use patterns and supporting community utility proposals against the agreed-upon development objectives, principles, standards, and related urban design guidelines presented in Chapter VI, as well as citizen reaction provided through a public informational meeting and hearing held during the planning process.

The recommended land use plan and street system plan, while recognizing the effects on, and importance of, the urban land market in shaping land use patterns, seeks to influence the operation of that market in two ways to achieve a more healthful, attractive, and efficient settlement pattern. First, the plans recommend that development trends be altered by encouraging intensive urban development to occur only in those areas which are covered by soils suitable for such development; which are not subject to such special hazards as flooding and which can readily be provided with urban facilities and services, including centralized sanitary sewer and public water supply. Second, the plans recommend that development trends be altered by discouraging intensive and incompatible urban development in delineated primary environmental corridors and other environmentally significant lands.

Specific, as well as general, land use development recommendations are contained in the recommended land use plan and street system plan. Accordingly, the plans provide Village officials with substantial guidance in considering land use development and redevelopment within the area. For example, the plans provide the Village with relatively specific urban design recommendations and provide a detailed street and lot layout for the Kewaskum planned urban service area. The land use and street system plans, however, should not be considered as rigid and unchangeable, but rather as a flexible guide intended to help local officials and concerned citizens review development proposals as such proposals are advanced. As conditions change from those used as the basis for the preparation of the plans, the plans should be reevaluated and revised as necessary.

The Recommended Land Use Plan for the Kewaskum Planning Area

The recommended land use plan for the entire Kewaskum planning area recommends the preservation of environmental corridors and other environmentally significant areas throughout the planning area and the preservation of the best remaining farmlands lying outside the planned urban service area. Most new urban development is proposed to be located within the planned urban service area, with some small concentrations of existing urban developments located outside this urban service area.

The plan recommends that new urban residential development, that is, development on lots with a net area of less than five acres per dwelling unit, take place only within the urban service area. If such development occurs outside that area, it should be located on existing vacant lots containing suitable soils that are capable of properly accommodating an onsite sewage-disposal system and a private well. Except for such "infill" areas, any new lots created outside the planned urban service area should be rural lots having a net density of at least five acres per dwelling unit and capable of properly accommodating a single-family dwelling, an onsite well, and an onsite sewage-disposal system. Other than the development of potential rural residential and recreational land uses, such as the recommended

expansion of the Kettle Moraine State Forest-Northern Unit by about 850 acres, the plan does not recommend any new urban development outside the planned urban service area.

Of the total 24-square-mile planning area considered in the recommended plan, about 3 square miles, or 14 percent, would be in urban uses; the remaining 21 square miles, or 86 percent, would consist of nonurban uses. Several important elements of the character of the planning area may be noted. First, natural areas would constitute the largest land use in the Kewaskum planning area, occupying almost 44 percent of the total planning area. This includes primary and secondary environmental corridors, isolated natural resource areas, and other environmentally significant lands identified as "Other Open Lands to be Preserved" on the plan. Agricultural uses would be the next largest land use, representing about 42 percent of the total planning area. Third, residential land uses would represent about 9 percent of the total planning area. Residential uses, however, would represent the largest single land use in the Kewaskum planned urban service area, about 38 percent of the total planned urban service area.

Trails, Parkway, and Scenic Drive: Bikeways, hiking trails, and a vehicular scenic drive are recommended under the plan for both recreational and utilitarian use. Approximately 23 linear miles of bikeways are recommended in the planning area, linking residential areas to significant urban and natural features in the area. Recommended routes of the Ice Age National Scenic Trail and other main local recreation trails, including those in the Kettle Moraine State Forest, are also shown for the planning area.

A more detailed trail system plan and map for the Kewaskum planned urban service area shows, not only the main trail routes, but also secondary trail routes connecting planned residential areas to the main routes. Segments of the aforementioned trail facilities are proposed along potential "parkways" or "greenways." The Village has a unique opportunity to establish an interconnecting parkway system with trail facilities along North, Knights, Edgewood, Kewaskum, and Kettle View Creeks and the Milwaukee River and its East Branch. The plan also recommends the continued recreational use of the Kettle Moraine Scenic Drive. Approximately five miles of this pleasure-drive route traverses the Kewaskum planning area.

The Recommended Land Use and Street System Plans for the Village of Kewaskum Urban Service Area

The recommended land use plan and street system plan for the Kewaskum planned urban service area indicates those areas in which urban development now exists and those areas in which such development should be permitted and encouraged. The existing 1990 and proposed 2010 land uses for both the Village urban service area and for the larger planned urban service area that extends beyond the year 2010 urban service area boundary of the Village are compared. The plan also depicts precise urban development patterns for the entire planned urban service area, including proposed street, lot, and block layouts for those areas recommended for new urban development. This more precise plan is intended to foster sound development of public facilities and utility systems.

It is important to note that the Village Plan Commission determined that the plan for the greater Kewaskum urban service area should reflect full development of that larger area in order to provide a longer-range land use plan and street system plan for the urban service area. This approach also provides flexibility for the operation of the urban land market without significantly affecting the substance of the plan and provides a basis for guiding future urban development in fringe areas. As a result, the recommended land use plan allocates more land to urban use than the minimum required to meet Village needs to the plan design year 2010 as those needs are set forth in Chapter VII.

Environmental Corridors and Other Environmentally Significant Lands: Under the recommended land use plan, primary environmental corridors would occupy about 562 acres, or 22 percent, of the Village urban service area, and about 706 acres, or 24 percent, of the total planned urban service area. The plan recommends that all primary environmental corridors be preserved, to the maximum extent possible, in essentially natural, open uses. Accordingly, the plan further recommends that sanitary sewers not be extended into such primary environmental corridors to accommodate urban development within the corridors. It is recognized in the plan, however, that it may be necessary in some cases to construct streets and sanitary sewers through primary environmental corridors and that certain land uses requiring sanitary sewer service may be properly located in the corridors, including park and limited outdoor recreation facilities and

certain institutional uses. In some cases, very-low-density residential development, compatible with the preservation of the corridors, may also be permitted to occupy corridor lands; it may be desirable to extend sewers into the corridors to serve such uses. Clustered residential development should be encouraged in environmentally significant areas over conventional land subdivision to minimize disturbance of natural resources.

The plan recommends the preservation of other environmentally significant areas. It proposes the preservation of about 124 acres, or 5 percent, of both the Village 2010 urban service area and the total planned urban service area in secondary environmental corridors and about 18 acres, or 1 percent, in isolated natural resource areas. The plan also recommends the preservation of other areas containing important natural resource values that would occupy together about 243 acres, or 10 percent, of the Village urban service area, and about 272 acres, or 10 percent, of total planned urban service area. The aforementioned natural areas lend themselves to use for private or public purposes including parks, drainageways, or stormwater detention or retention areas.

Residential Land Uses: Areas shown on the recommended plan for residential use would approximate 920 acres, or 37 percent, of the Village 2010 urban service area, and about 1,105 acres, or 38 percent, of the total planned urban service area. Residential development is proposed to occur primarily through the creation of new residential areas located contiguous to, and extending outward from, existing residential developments. The plan identifies five distinct categories of residential land uses based upon the residential density standards advanced in Chapter VI and the land requirements set forth in Chapter VII. The five categories include three types of single-family residential use: sub-urban-, low-, and medium-density, with net lot sizes ranging from 7,200 square feet up to 5.0 acres; one type of two-family residential use, medium-high-density housing, with 6.1 to 7.3 dwelling units per net acre; and one type of multi-family residential use, high-density accommodations, with 7.4 to 21.8 dwelling units per net acre. The plan recommends that new multi-family residential developments occur at the lower end of the density range, approximately 10 to 14 dwelling units per net acre, which is similar to the overall density of existing multi-family residential developments.

Commercial Land Uses: The plan identifies commercial areas encompassing about 122 acres, or about 5 percent, of the Village 2010 urban service area, and about 136 acres, or 5 percent, of the total planned urban service area. Most of these areas represent expansions of existing commercial areas along major arterial streets as well as new areas that would serve commercial retail sales and service land use needs to the year 2010 and beyond. Categories of specific commercial development shown on the plan include two neighborhood commercial centers and the community Central Business District (CBD). In addition, a business conducting wholesale or retail sales and warehousing or a highway-oriented commercial development with drive-in establishments is recommended on a site in the southern part of the planned urban service area.

Industrial Land Uses: Under the recommended plan, the areas proposed for industrial land uses would occupy the same amount of area, about 133 acres, or about 5 percent, within both the Village 2010 urban service area and the total planned urban service area. Most of the recommended increase in industrial development would occur through the expansion of existing industrial areas and through the creation of two industrial parks, one northwest and one southeast of the Village, as identified on Map 32.

Governmental and Institutional Land Uses: Governmental and institutional land uses under the recommended plan would occupy about 99 acres, or 4 and 3 percent, respectively, of the Village 2010 urban service area and the entire planned urban service area. These uses include the continuation of existing governmental and institutional uses as well as areas for expanding the Municipal Building site and developing a new public library and/or community center and a new elementary school.

Village Hall and Library/Community Center: The plan incorporates the tentative plans of the Village to expand the existing Municipal Building site to the north and east in order to provide additional parking. The Village is also contemplating the relocation of the library and/or community room which would free space for future expansion needed within the Municipal Building. At this time, existing Village governmental operations, except the library and/or community room, are anticipated to continue at the present location to the year 2010.

The plan shows a tentative site for a new public library and/or community center on the old Sentry Food Store site, northwest of the intersection of Main Street (STH 28) and Railroad Street, to accommodate a larger library and/or community

meeting activities. It is recommended that, prior to any expansion activities, the Village retain a consultant to study the future spatial needs and desirable arrangement for both the Village governmental activities and the library/community center due to various factors that may affect the spatial requirements.

Fire-Protection Facilities: Map 32 indicates that most of the intensive urban development within the planned urban service area would lie within the 1.5-mile optimum service radius of the existing Village fire station. Accordingly, the plan recognizes the continued use of the Village of Kewaskum Fire Department at the present location to provide fire protection services as development occurs within the planned urban service area.

Educational Facilities: With full development of the planned urban service area, the existing Middle and High School capacities would need to be expanded and a new elementary school would be needed, given the school capacity standards in Table 20. The recommended land use plan, accordingly, shows the tentative location of a potential public elementary school within the planned urban service area, south of the Kewaskum Kiwanis Community Park, where the recreation facilities could be shared by students and neighborhood residents. The identification of this school facility site is not intended to imply that such a facility will be needed by the year 2010; it is provided to allow the Kewaskum School District an opportunity to reserve land in advance for a school that may be needed to serve the resident population beyond the year 2010, unless the school-age population in the large School District warrants such a need before then.

As noted earlier, the Kewaskum School District was in 1996 conducting a school facility study to consider options that go beyond the recent remodeling and renovating of the interior of both the Kewaskum Middle and High Schools. The options still under consideration include remodeling the existing Kewaskum Elementary School, replacing that school on the present site, or relocating the school to the Middle School site. If any additional lands are needed within the planned urban service area as a result of this District study and any other future school facility need studies undertaken by the School District, the recommended land use and street system plans presented here should be amended accordingly.

Park and Recreational Land Uses: Under the recommended plan, intensive outdoor recreational land uses would encompass about 245 acres, or 10 percent, of the Village 2010 urban service area, and about 254 acres of land, or 9 percent, of the entire planned urban service area. Existing and proposed public parks within the planned urban service area, including the expansion of Kewaskum Kiwanis Community Park and part of the expansion of the Kettle Moraine State Forest-Northern Unit discussed earlier, are shown. The plan recommends three new neighborhoods parks within the planned urban service area and envisions the continued use of private recreational facilities, including the Holy Trinity Catholic School property and the Hon-E-Kor Golf Club and Country Club. A parkway system and trial-oriented facilities are also advanced by the recommended plan.

Transportation System Development

The land use plan proposes an attendant integrated street system plan for the planned urban service area. The proposed street system is organized on a functional basis and consists of arterial, collector, and minor land-access streets. The highway and arterial street system is based upon the adopted 2010 regional transportation system plan. The Village Plan Commission determined that the recommended street system plan should identify potential ultimate right-of-way widths for major arterial streets since the recommended land use plan and street system plan are to represent full development of the Kewaskum planned urban service area. Accordingly, six planned arterial streets are likely to require significant additional right-of-way to accommodate future increases in traffic: CTH V, CTH H, Badger Road, Kettle View Drive, STH 28, and CTH S. In addition, four travel lanes will need to be provided, with prohibited on-street parking, on USH 45 between the Village of Kewaskum southern corporate limits and STH 28 at its northern corporate limits. Suggested cross-sections for these streets are provided in Chapter VI. The street system plan provides a sound framework for land use development in the Kewaskum area and may, therefore, be regarded as an important land use element.

In the preparation of the street system plan, all modes of travel, including walking, bicycling, carpooling, and transit, were considered in the plan design process. The plan recommends that a metropolitan commuter-oriented "park-and-pool" lot be located northwest of the intersection of USH 45 and

CTH H. The plan also recognizes the continued use of the railroad freight services provided by the Wisconsin Central Transportation Company on its main line from Milwaukee to Green Bay via Fond du Lac.

Urban Design Recommendations

Urban design recommendations based, in part, on the design guidelines provided in Chapter VI are included in the recommended plans to help the Village continue its efforts to maintain and improve the unique visual aspect of the community and the vitality of its downtown business district through sound development and redevelopment. The good appearance and proper design of sites within the Village will ensure a more attractive community and help to stabilize, and even increase, property values, to the advantage of both the community and the individual property owners concerned.

Urban design recommendations include:

1. Improving the Kewaskum CBD and identifying and preserving any significant historic resources in this district and the community;

2. Streetscaping along major arterials, including planting attractive street trees, provision of ornate street furniture, and installation of decorative streetlights with colorful banners;

3. Reducing or eliminating the negative visual clutter of overhead utility lines and supporting structures;

4. Encouraging landscaping to be provided by private property owners, including building foundation landscaping, parking area screening, buffer or perimeter strip landscaping, sign landscaping, and interior parking lot landscaping;

5. Providing architectural review guidelines for buildings and other structures in the historic Kewaskum CBD;

6. Ensuring the proper maintenance of landscaping, buildings, and other structures; and

7. Improving vehicular, bicycle, and pedestrian circulation.

Although the Village exhibits some urban design problems, it also has certain assets which can be enhanced to the benefit of the community. The heavy traffic volumes along major arterial streets traversing the Village provide an opportunity to present a positive image to users of those facilities, including those that perceive the Village as the "gateway" to the Kettle Moraine State Forest-Northern Unit. Since two arterials, Fond du Lac Avenue (USH 45) and Main Street (STH 28), serve as the "main streets" through the historic Kewaskum CBD, an effort should be made to improve the image of these arterials and the downtown. Furthermore, an opportunity exists to provide trail facilities along a potential interconnecting parkway system linking this district to surrounding major attractions in the Kewaskum area, such as the Sunburst Ski Area, Hon-E-Kor Golf and Country Club, and Kettle Moraine State Forest—Northern Unit, which encompasses part of the Ice Age National Scenic Trail. In addition to the cultural attractions, these trail facilities could pass through the unique glacial features in the Kewaskum area with their natural attractive vegetation along meandering waterways, including the Milwaukee River.

CHAPTER IX: PLAN IMPLEMENTATION

The recommended land use and street system plans provide a design for the attainment of the community development objectives expressed in Chapter VI of this report. The plans are not complete, however, until the steps necessary to implement them have been specified. Attainment of the plan objectives will require the application and modification of certain plan implementation measures, as noted in Chapter IX. After holding a public informational meeting and hearing on the plans, an important step in plan implementation is the formal adoption of the plan by the Village Plan Commission and the Village Board. Upon such adoption, the plans become the official guide to decisions made by Village officials concerning the development and redevelopment of the Village and environs. The recommended plans were adopted by the Village Plan Commission on June 10, 1997, and by the Village Board on June 23, 1997.

Following plan adoption, the Village Plan Commission should initiate appropriate amendments to the Village land division and zoning ordinances and the zoning district map, as necessary, to help implement the adopted plans and related urban design standards. Existing and proposed streets, highways, parkways, parks, and playgrounds shown on the plans should be incorporated into an official map for the Village and environs.

The adopted plans should serve as a basis for the review of land subdivision plats and certified survey

maps by municipal officials. All urban subdivisions should be required to provide a full complement of urban services. Those elements of the plans requiring public expenditures for implementation may be funded in part by impact fees under an impact fee ordinance or could be integrated into the Village capital improvements program.

Within the framework of the land use and street system plans, detailed trail facility system plans and revitalization and historic preservation plans should be prepared for the Village and for the Kewaskum CBD. The preparation of detailed, comprehensive bicycle and recreational trail facility plans will serve to further refine and detail the plans presented herein. In addition, the preparation of detailed urban development and redevelopment plans for the Kewaskum CBD and environs will also serve to refine and further detail the urban design elements of the adopted plans, shown in Chapter VIII. Historic preservation planning should also take place, beginning with the Village conduct of a historical survey, with professional assistance, to define the Village historic heritage and resources and, further, to help plan for the preservation of these precious resources to prevent future disrepair or demolition.

CONCLUDING REMARKS

The recommended land use and street system plans, together with supporting plan implementation measures, provide an important means to promote the orderly growth and development of the Kewaskum area and to preserve and enhancing its unique urban and rural characteristics over time. If the plans are properly and consistently utilized in the evaluation of proposed zoning changes, the review of proposed land subdivision, and the consideration of other physical development proposals, costly developmental and environmental problems could be avoided. Consistent application of the plans will help assure that individual development proposals will be channeled toward the sound development of the community.

APPENDICES

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Appendix A

A PLANT SELECTION GUIDE FOR LANDSCAPE PLANTING IN THE VILLAGE OF KEWASKUM

The following tables list plants recommended for landscape use within the Village of Kewaskum and environs. The plant selection guide is divided into six tables listing deciduous trees, evergreen trees, deciduous shrubs, evergreen shrubs, groundcovers, and vines. A summary of plant characteristics follows each name and the first four tables further group the plants by height. The tables are not exhaustive, but include plants that are usually available within the Southeastern Wisconsin region. Before selecting plants for a specific location, various site characteristics should be carefully analyzed, including soil type, drainage conditions, air temperature, growing space, sunlight exposure, wind exposure, salt exposure, utility lines, traffic visibility, snow compaction, and other site conditions that will significantly affect the location and growth of plants.

As a general guide, trees and shrubs used for buffering or screening purposes should be of the following minimum sizes:

1) Deciduous shade trees and ornamental trees should have a caliper size of at least two (2) inches and one and one-half (1 1/2) inches in diameter, respectively, which are measured at least 6 inches above ground level.

2) Evergreen trees should be at least five (5) to six (6) feet in height;

3) Deciduous and evergreen shrubs used to screen parking areas from public streets should be at least 18 to 24 inches in height and grow to an overall screening height of at least three (3) feet above the parking surface after three years. A minimum plant size of five (5) to six (6) feet in height is suggested for buffering between incompatible land uses. Smaller plants could be used if combined with other landscape features, such as planters or berms, provided the desired degree of buffering or screening is achieved.

Deciduous trees selected for installation along streets should have a caliper size of at least two (2) inches in diameter, measured at chest height, approximately five feet above ground level. The over use of one kind of tree should be avoided. For a more complete guide to street tree planting, refer to the sources given at the end of this appendix.

Abbreviations used in the following tables include:

cvs. — cultivars
f. — forma
spp. — species
ssp. — subspecies
var. — variety

Appendix A (continued)

A. DECIDUOUS TREES

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
TALL TREES: 40 to 100 feet; plant at least 40 to 50 feet apart; columnar species, 20 to 30 feet apart				
•*Ash, Green (G.A.)	Fraxinus pennsylvanica	F	Oval-irregular	Dry to wet soil; tolerates poor drainage; twiggy and weak-wooded; yellow fall color; pest or disease problem may limit use
Aerial G.A.	"Aerial"	F	Columnar	Narrow, upright branching
Marshall Seedless G.A.	"Marshall Seedless"	F	Oval	Seedless; glossy, dark green foliage; improved habit of growth
Patmore G.A.	"Patmore"	F	Oval	Seedless; shining green leaves; yellow fall color; straight trunk
Summit G.A.	"Summit"	F	Upright	Finer textured foliage
•*Ash, White (W.A.)	Fraxinus americana	M	Round	Moist soil; tolerates poor drainage; dioecious; orange to purple fall color; salt-tolerant
Autumn Applause W.A.	"Autumn Applause"	M	Oval	Seedless; deep red fall color
Autumn Purple W.A.	"Autumn Purple"	M	Round	Seedless; superior fall color
Champaign County W.A.	"Champaign County"	M	Oval	Seedless; shiny dark green foliage; yellow to purplish fall color
Rosehill W.A.	"Rosehill"	S	Oval	Seedless; dark green foliage; bronze-red fall color
Skyline W.A.	"Skyline"	M	Oval	Seedless; upright habit
*Beech, American	Fagus grandifolia	S	Oval	Moist, rich soil; smooth, gray bark; yellow-bronze fall color; difficult to transplant; shallow root system sensitive to trampling
Beech, European	Fagus sylvatica	S	Round	Moist, rich soil; less difficult to transplant than F. grandifolia; several cultivars available
Catalpa, Northern	Catalpa speciosa	F	Oval	Poor, dry soil; showy, white, June flowers; coarse; litter problem; no fall color; subject to verticillium wilt
*Cherry, Black	Prunus serotina	M	Oval	Dry soil; white flowers and littering black fruits; orange fall color; subject to black knot
*Coffeetree, Kentucky	Gymnocladus dioica	M	Upright	Moist, rich soil; coarse and rugged; dioecious; litter problem
•Elm, Hybrid (H.E.)	Ulmus x "New Horizon"	F	Upright	Dutch elm disease-resistant; urban
Regal H.E.	"Regal"	F	Upright	Dutch elm disease-resistant; urban
•Ginkgo (G.); Maidenhair Tree	Ginkgo biloba (male only)	S	Pyramidal	Urban; dioecious, females produce smelly fruits; fan-shaped leaves; golden yellow fall color
Autumn Gold G.	"Autumn Gold"	S	Conical	Urban; fruitless; yellow fall color
Lakeview G.	"Lakeview"	S	Columnar	Urban; fruitless; yellow fall color
Sentry G.	"Fastigiata"	S	Columnar	Fruitless; yellow fall color
•*Hackberry, Common (C.H.)	Celtis occidentalis	M	Vase	Tolerates alkaline soils; "pebbled" bark; hard black fruits; yellowish fall color; pest or disease problem and "witches" broom may limit use
Prairie Pride C.H.	"Prairie Pride"	M	Vase	Superior branch structure; glossier leaves; no witches" broom
*Honeylocust, Common	Gleditsia triacanthos	F	Vase	Urban; tolerates poor drainage; salt-tolerant; dioecious, females produce pods; fine-textured foliage; wicked thorns; yellow fall color; pest or disease problems may limit use

A. DECIDUOUS TREES (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
TALL TREES: 40 to 100 feet; plant at least 40 to 50 feet apart; columnar species, 20 to 30 feet apart (continued)				
•Thornless Common Honeylocust (T.C.H.)	Gladitsia triacanthos var. inermis	F	Vase	Tolerates poor drainage; thornless, as are all the following; pest or disease problem may limit use; salt-tolerant
Imperial T.C.H.	"Imperial"	F	Round	Podless; low-growing; flat-topped; pest or disease problem may limit use
Majestic T.C.H.	"Majestic"	F	Irregular	Podless; resistant to diseases; pest problems may limit use
Moraine T.C.H.	"Moraine"	F	Irregular	Usually fruitless; dense foliage
Shademaster T.C.H.	"Shademaster"	F	Irregular	Podless; vase shape in age; pest or disease problem may limit use
Skyline T.C.H.	"Skyline"	F	Upright	Podless; tends to form central leader; good golden fall color; pest or disease problem may limit use
Sunburst T.C.H.	"Sunburst"	F	Irregular	Podless; yellow new foliage; poor branch structure; pest or disease problem may limit use
Horsechestnut (H.)	Aesculus hippocastanum	M	Round	Urban; coarse; showy, white, May flowers; litter problem; no fall color; difficult to transplant; pest or disease problems may limit use; salt-tolerant
•Bauman H.	"Baumanni"	M	Round	Showy white flowers; fruitless
Larch, European	Larix decidua	F	Pyramidal	Full sun; graceful, fine-textured; transplant in spring before buds open; litter problem
Larch, Japanese	Larix kaempferi	F	Wide-pyramidal	Similar to above, more picturesque
*Linden, American (A.L.); Basswood	Tilia americana	M	Round	Salt-sensitive; coarse; rich soils
•Redmond A.L.	"Redmond"	M	Pyramidal	Urban; dark green foliage
•Linden, Littleleaf (L.L.)	Tilia cordata	S	Pyramidal	Urban; moist soil; fragrant flowers; poor branch structure, needs training while young; yellow fall color
Chancellor L.L.	"Chancellor"	S	Pyramidal	Uniform, upright habit
Glenleven L.L.	"Glenleven"	M	Pyramidal	Straight, upright habit
Greenspire L.L	"Greenspire"	S	Pyramidal	Improved branching habit
•Linden, Silver	Tilia tomentosa	S	Pyramidal	Tolerates heat and drought
•Maple, Norway (N.M.)	Acer platanoides	M	Round	Urban; dense canopy; competitive roots; late yellow fall color; salt-tolerant
Cleveland N.M.	"Cleveland"	F	Oval-upright	Uniform, dense foliage
Columnar N.M.	"Columnare"	F	Columnar	Indistinct central leader
Crimson King N.M.	"Crimson King"	S	Round	Dense foliage; dark red leaves all summer
Deborah N.M.	"Deborah"	F	Oval	New foliage reddish; bronze by summer; an improved "Schwedleri"
Emerald Lustre N.M.; Pond N.M.	"Emerald Lustre"	F	Oval	More winter-hardy
Emerald Queen N.M.	"Emerald Queen"	F	Oval	Vigorous; crisp foliage
Greenlace N.M.	"Greenlace"	S	Round	Deeply divided, fine-textured leaves
Harlequin N.M.; Silver Variegated N.M.	"Drummondii"	S	Round	Variegated, cream-edged leaves
Royal Red N.M.	"Royal Red"	S	Round	Best for purple summer foliage

A. DECIDUOUS TREES (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
TALL TREES: 40 to 100 feet; plant at least 40 to 50 feet apart; columnar species, 20 to 30 feet apart (continued)				
•Maple, Norway (N.M.) (continued)				
Schwedler N.M.	"Schwedler"	M	Oval	Purplish-red new leaves turn bronze-green; orange to yellow fall color
Summershade N.M.	"Summershade"	F	Oval	Leathery dark green leaves; yellow fall color
Superform N.M.	"Superform"	M	Round	Straight trunk; dense, dark foliage; yellow fall color
•*Maple, Red (R.M.)	Acer rubrum	F	Round	Moist, acid soil; tolerates poor drainage; smooth gray bark turns flaky with age; yellow, orange, or red fall color
Autumn Flame R.M.	"Autumn Flame"	F	Round	Early, scarlet fall color
Bowhall R.M.	"Bowhall"	F	Oval	Orange fall color
Red Sunset R.M.	"Red Sunset"	F	Round	Late, scarlet fall color
Schlesinger R.M.	"Schlesingeri"	F	Round	Red-orange fall color
*Maple, Silver (S.M.)	Acer saccharinum	F	Vase	Moist soil; tolerates poor drainage; fine-textured; weak-wooded; competitive roots; yellowish or no fall color; subject to storm damage
Celebration S.M.	"Celebration"	F	Vase	Seedless
Upright S.M.	"Pyramidale"	F	Pyramidal	Improved branch structure
•*Maple, Sugar (S.M.)	Acer saccharum	M	Round	Sun; rich soil; salt-sensitive; oval when young; competitive roots; yellow, orange, or red fall color
Black Maple	ssp. nigrum	M	Round	Scorch-resistant; leathery leaves
Green Mountain S.M.	"Green Mountain"	M	Round	Scorch-resistant; leathery leaves
Legacy S.M.	"Legacy"	M	Round	Scorch-resistant; leathery leaves
*Oak, Bur	Quercus macrocarpa	S	Round	Full sun; dry to wet soil; acorns; no fall color; difficult to transplant
•Oak, Pin	Quercus palustris	M	Pyramidal	Moist, acid soil; acorns; pendulous lower branches; red fall color; iron chlorosis on alkaline soil
•*Oak, Red	Quercus rubra	M	Round	Urban; pyramidal when young; acorns; red fall color; well-drained soil; often sold as Q. borealis
*Oak, Swamp White	Quercus bicolor	S	Round	Moist to wet soil; urban; tolerates poor drainage
*Oak, White	Quercus alba	S	Round	Dry soil; subject to iron chlorosis; red fall color; difficult to transplant
Tuliptree; Tulip Magnolia	Liriodendron tulipfera	F	Upright	Rich, moist soil; unique leaves, interesting June flowers; yellow fall color; purchase from northern source
•Zelkova, Japanese (J.Z.)	Zelkova serrata	M	Vase	Dutch elm disease resistant; urban; dark green foliage; yellow-orange-brown fall color
Green Vase J.Z.	"Green Vase"	F	Vase	Dutch elm disease resistant; more upright branching habit; bright green foliage; bronze-red fall color
Village Green J.Z.	"Village Green"	F	Vase	Dutch elm disease resistant; dark green foliage; rusty red fall color

A. DECIDUOUS TREES (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
MEDIUM TREES: 30 to 40 feet; plant at least 20 to 35 feet apart, depending on spread				
Alder, European	Alnus glutinosa	F	Oval	Wet soil; tolerates poor drainage; catkins; cone-like fruits; no fall color
*Birch, River (R.B.)	Betula nigra	M	Vase	Wet to dry soil; intolerant of alkaline soils; tolerates poor drainage; pinkish, peeling bark; yellow fall color
Heritage R.B.	"Heritage"	M	Vase	Lighter bark color
Birch, Whitespire	Betula platyphylla var. japonica "Whitespire"	M	Pyramidal	White bark; heat tolerance results in greater resistance to bronze birch borer
Buckeye, Ohio	Aesculus glabra	S	Round	Rich, moist soil; yellow-green flowers; orange fall color
•Cherry, Sargent (S.C.)	Prunus sargentii	M	Upright	Sun; well-drained soil; early, pink flowers; red fall color
Columnar S.C.	"Columnaris"	M	Columnar	Glossy dark green foliage; red-orange fall color; polished bark
Chokecherry, Amur	Prunus maackii	M	Round	Amber, exfoliating bark; does well in containers
Corktree, Macho Amur	Phellodendron amurense "Macho"	M	Vase	Urban; dry soil; seedless; compound leaves; corky bark; yellow fall color
•Elm, Lacebark; Chinese Elm	Ulmus parvifolia	M	Vase	Dutch elm disease-resistant; exfoliating bark
•Horsechestnut, Ruby Red	Aesculus x carnea "Briotii"	S	Round	Rich, moist soil; cone-shaped red flowers; subject to sunscald; nearly fruitless
•Pear, Callery (C.P.)	Pyrus calleryana	M	Round	Sun; early, white flowers; glossy dark green foliage; red fall color; weak branch structure needs training while young
Aristocrat C.P.	"Aristocrat"	M	Pyramidal	Glossy, dark green leaves; red-purple fall color; more horizontal branch structure than "Bradford"; thornless
Autumn Blaze C.P.	"Autumn Blaze"	M	Round	Most winter-hardy; horizontal branching; some thorns
Bradford C.P.	"Bradford"	M	Pyramidal	Full sun; inconspicuous fruits; glossy dark green leaves; scarlet-purple fall color; white flowers; resistant to fire blight; thornless
Chanticleer C.P.; Cleveland Select C.P.	"Chanticleer"	M	Columnar	Upright branches; thornless
Redspire C.P.	"Red Spire"	M	Pyramidal	Glossy, dark leaves; yellow, crimson, purple fall color
Select C.P.	"Select"	M	Pyramidal	Glossy green leaves; red-orange fall color; white flowers
Katsuratree	Cercidiphyllum *japonicum*	M	Vase	Moist soil; dioecious; small pods; form controlled by pruning, wide-spreading if multi-trunked; yellow to apricot fall color
Willow, Golden Weeping	Salix x sepulcralis "Tristis"	F	Weeping	Wet soil; tolerates poor drainage; bright yellow twigs; fine-textured; litter problem
LOW TREES: 15 to 30 feet; plant at least 15 to 30 feet apart, depending on spread				
*Chokecherry (C.)	Prunus virginiana	M	Upright	Dry, infertile soil; suckering habit; white flowers; yellow to orange fall color
Canada Red C.; Shubert C.	"Canada Red"; "Shubert"	M	Upright	Sun; foliage changes from green to purple in the summer

Appendix A (continued)

A. DECIDUOUS TREES (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
LOW TREES: 15 to 30 feet; plant at least 15 to 30 feet apart, depending on spread (continued)				
Crabapples, Ornamental; Flowering Crabapples (C.)	Malus spp. and cvs.			All require sun and well-drained soil. Most possess a high degree of resistance to the apple scab disease
Adams C.	"Adams"	M	Spreading	Slightly susceptible to fire blight; rose-red flowers; persistent deep red fruits
Betchel C.	"Betchel"	M	Upright-spreading	Pink flowers
Bob White C.	"Bob White"	M	Rounded	Moderately susceptible to fire blight; white flowers; persistent yellow fruits
Candied Apple C.	"Candied Apple"	M	Weeping	Slightly susceptible to scab; pink flowers; persistent cherry-red fruits; foliage tinged with red
Coralburst C.	"Coralburst"	M	Rounded	Disease-resistant; coral-pink buds; rose-pink flowers; dwarf-type tree
Dolgo C.	"Dolgo"	F	Upright-spreading	White flowers; crimson fruits; disease resistant
Donald Wyman C.	"Donald Wyman"	M	Rounded-spreading	Disease resistant; white flowers; persistent bright red fruits
Indian Magic C.	"Indian Magic"	M	Vase	Pink flowers; moderately susceptible to scab; glossy red fruits
Indian Summer C.	"Indian Summer"	M	Rounded	Disease-resistant; rose-red flowers; persistent red fruits
Jack C.	Malus baccata "Jackii"	M	Upright-spreading	Slightly susceptible to fire blight; white flowers; tiny, dark red fruits
Japanese C.	Malus floribunda	M	Spreading	Slightly susceptible to scab and powdery mildew; moderately susceptible to fire blight; pink-white flowers; yellow-red fruits
Kelsey C.	"Kelsey"	M	Upright-spreading	Pink flowers; semi-dwarf tree
Mary Potter C.	"Mary Potter"	S	Horizontal	Moderately susceptible to fire blight and scab; white flowers; red fruits
Ormiston Roy C.	"Ormiston Roy"	M	Rounded	Slightly susceptible to fire blight; white flowers; persistent yellow fruits
Pink Spires C.	"Pink Spires"	M	Upright	Moderately susceptible to scab and slightly susceptible to fire blight and leaf spot; pink flowers; purplish-red fruits; copper fall color
Professor Sprenger C.	"Professor Sprenger"	M	Upright-spreading	Disease resistant; white flowers; persistent orange fruits
Profusion C.	"Profusion"	M	Rounded-spreading	Slightly susceptible to fire blight; rose-red flowers; deep red fruits; bronze-green foliage
Radiant C.	"Radiant"	F	Upright	Susceptible to scab; pink flowers; compact, symmetrical tree
Red Barron C.	"Red Barron"	M	Upright	Magenta-red flowers; glossy, dark red fruits; reddish fall foliage
Red Jade C.	"Red Jade"	S	Weeping	Moderately susceptible to scab and powdery mildew; white flowers; glossy red fruits
Red Jewel C.	"Red Jewel"	M	Upright-spreading	Moderately susceptible to scab; white flowers; persistent bright red fruits
Red Splendor C.	"Red Splendor"	M	Vase	Slightly susceptible to scab and moderately to fire blight; pink flowers; bright red fruits remain into winter
Royalty C.	"Royalty"	S	Vase/upright	Severely susceptible to scab and slightly to fire blight; purple-red flowers; dark red fruits

A. DECIDUOUS TREES (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
LOW TREES: 15 to 30 feet; plant at least 15 to 30 feet apart, depending on spread (continued)				
Crabapples, Ornamental; Flowering Crabapples (C.) (continued)				
Sargent Crab	Malus sargentii	S	Spreading	Slightly susceptible to scab, fire blight, and leaf spot; white flowers; dark red fruits; dwarf tree
Sentinel C.	"Sentinel"	S	Upright	Slightly susceptible to fire blight and scab; white flowers; persistent bright red fruits
Snowdrift C.	"Snowdrift"	S	Vase	Slightly susceptible to scab and fire blight; white flowers; orange-red fruits
Spring Snow C.	"Spring Snow"	S	Vase	Severely susceptible to scab and slightly to fire blight; white flowers; fruitless
Van Eseltine C.	"Van Eseltine"	M	Vase	Severely susceptible to scab and fire blight; pink flowers; yellow fruits
White Cascade C.	"White Cascade"	S	Weeping	Disease-resistant; white flowers; yellowish fruits
Zumi Calocarpa C.	Malus sieboldii var. zumi "Calocarpa"	S	Pyramidal	Slightly susceptible to scab, mildew and severely to fire blight; white to pink flowers; bright red fruits
*Dogwood, Pagoda	Cornus alternifolia	M	Spreading	Cool, moist soil; shade; blue-black fruits on red stalks; early, maroon fall color
*Hawthorn, Cockspur (C.H.)	Crataegus crus-galli	S	Spreading	Urban; sun; persistent, brick red fruits; orange to red fall color; thorns
•Thornless C.H.	var. inermis	M	Spreading	Few thorns; dark green foliage; bright red fruits.
*Hawthorn, Dotted	Crataegus punctata	S	Spreading	Moist, heavy soil; sun; picturesque; susceptible to rust
*Hawthorn, Downy	Crataegus mollis	S	Spreading	Sun; large, red, early-ripening fruit; yellow fall color; susceptible to rust
Hawthorn, Washington	Crataegus phaenopyrum	M	Upright	Urban; sun; thorns; latest blooming; small, persistent, orange-red fruits in clusters; orange fall color
Hawthorn, Winter King	Crataegus x viridis "Winter King"	M	Upright	Sun; few thorns; glossy leaves; persistent red fruits; silver bark
•*Hophornbeam; Ironwood	Ostrya virginiana	S	Pyramidal	Dry soil; shade; catkins; elm-like leaves; yellowish fall color
•*Hornbeam, American; Blue Beech; Ironwood; Musclewood	Carpinus caroliniana	S	Spreading	Moist soil; shade; smooth, gray, muscle-like trunk; orange fall color
•Lilac, Japanese Tree (J.T.L.)	Syringa reticulata	S	Horizontal	Sun; large, pyramidal, cream-white fragrant flower cluster in June; tan fruits; salt-tolerant
Ivory Silk J.T.L.	"Ivory Silk"	S	Oval	Straight, single trunk
Summer Snow J.T.L.	"Summer Snow"	M	Globe	Glossy dark green leaves; large creamy-white flowere; cherry-like bark
Maple, Amur (A.M.)	Acer ginnala	M	Round	Partial shade; red fruits; orange-red fall color; usually multiple trunk
Bailey Compact A.M.	"Bailey Compact"	M	Round	More compact; 10' high
Magnolia, Loebner (L.M.)	Magnolia x loebneri	S	Pyramidal	Rich soil; sun; difficult to transplant
Leonard Messel L.M.	"Leonard Messel"	S	Pyramidal	Pink flowers
Merrill L.M.	"Merrill"	S	Pyramidal	White flowers
Magnolia, Saucer	Magnolia x soulangiana	S	Round	Rich soil; sun; large pink flowers; difficult to transplant; subject to alkaline soil-induced chlorosis

A. DECIDUOUS TREES (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
LOW TREES: 15 to 30 feet; plant at least 15 to 30 feet apart, depending on spread (continued)				
Magnolia, Star	Magnolia stellata	S	Round	Sun; well-drained soil; early white flowers
•Maple, Globe Norway	Acer platanoides "Globosum"	S	Globe	Urban; dense canopy; yellow fall color; useful on a standard under utility wires; 20' height
*Mountainash, American	Sorbus americana	S	Oval	Cool soil; white flowers; orange-red fruits
Mountainash, European	Sorbus aucuparia and cvs.	M	Oval	Cool soil; orange fruits; pest or disease problem
Mountainash, Korean	Sorbus alnifolia	S	Oval	Cool soil; simple leaves; small flowers and fruits; orange to red fall color; subject to fire blight
*Mountainash, Showy	Sorbus decora	S	Upright	Cool soil; large, reddish fruits; pest or disease problem
*Plum, American	Prunus americana	F	Horizontal	Dry soil; sun; suckering habit; white flowers; yellow to orange fall color
Plum, Newport	Prunus x "Newport"	M	Round	Sun; reddish-purple summer foliage
Redbud, Eastern	Cercis canadensis	M	Spreading	Sun or shade; purplish-pink flowers; yellow fall color; "Columbus strain" is the most winter-hardy
Russianolive	Elaeagnus angustifolia	M	Round	Sun; thorns; gray foliage
*Serviceberry, Allegany (A.S.)	Amelanchier laevis	S	Upright	Moist soil; white flowers; orange to red fall color; edible fruits
Cumulus A.S.	"Cumulus"	S	Upright	Single trunk
*Serviceberry, Apple (A.S.)	Amelanchier x grandiflora	S	Upright	Moist soil; white flowers; orange to red fall color; edible fruits
Autumn Brilliance A.S.	"Autumn Brilliance"	S	Spreading	Bright red-orange fall color
Princess Diana A.S.	"Princess Diana"	S	Spreading	Bright red-orange fall color
Strata A.S.	"Strata"	S	Spreading	Horizontal branching
*Serviceberry, Downy; Juneberry	Amelanchier arborea	S	Upright	Dry soil; suckering; gray bark; white flowers; yellow fall color; edible fruits
Willow, Contorted; Corkscrew Willow	Salix matsudana "Tortuosa"	F	Upright	Wet soil; tolerates poor drainage; sun; twisted branches; pest or disease problem
Willow, Laurel	Salix pentandra	M	Round	Wet soil; sun; glossy, dark green foliage; dense habit; good screening plant

[a]*The following letters represent: S — Slow; M — Medium; and F — Fast.*

• Street tree.

* Wisconsin native.

B. EVERGREEN TREES

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
TALL TREES: 60 to 80 feet; plant at least 25 to 35 feet apart, depending on spread				
Fir, Douglas	Pseudotsuga menziesii	M	Pyramidal	Half-shade; flat, dark green needles
Fir, White	Abies concolor	M	Pyramidal	Dry soil; heat-tolerant; gray-green foliage
*Hemlock, Canadian	Tsuga canadensis	M	Pyramidal	Moist soil; shade; soft, feathery foliage
*Pine, Eastern White	Pinus strobus	M	Pyramidal	Moist soil; sun; picturesque; soft, green foliage subject to blister rust
Spruce, Colorado Blue	Picea pungens var. glauca	S	Pyramidal	Sun; urban; blue needles; stiff, formal habit
Spruce, Norway	Picea abies	F	Pyramidal	Deep soil; dark green foliage; long cones; pendulous branchlets
MEDIUM TREES: 40 to 60 feet; plant at least 25 to 35 feet apart, depending on spread				
Pine, Austrian	Pinus nigra	M	Pyramidal	Sun; salt-tolerant; urban; stout, dark green needles; pest or disease problem
*Pine, Jack	Pinus banksiana	M	Pyramidal	Dry soil; sun; yellow-green winter color; salt-tolerant
*Pine, Red	Pinus resinosa	F	Pyramidal	Dry soil; sun; reddish bark; yellow-green winter color
Pine, Scots; Scotch Pine	Pinus sylvestris	F	Irregular-pyramidal	Dry soil; sun; orange bark; bluish needles
Pine, Swiss Stone	Pinus cembra	S	Columnar-pyramidal	Sun; narrow habit
Spruce, Serbian	Picea omorika	S	Columnar-pyramidal	Sun; narrow habit; pendulous branchlets
*Spruce, White	Picea glauca	M	Pyramidal	Moist soil; sun; light green needles
LOW TREES: 15 to 40 feet; plant at least 10 to 25 feet apart, depending on spread				
*Arborvitae, American, (A.A.); White Cedar	Thuja occidentalis	M	Columnar-pyramidal	Moist soil; half-shade; light green, soft, scale-like foliage, brownish-green in winter; screening plant
Dark Green A.A.	"Nigra"	S	Columnar-pyramidal	Dark green foliage persistent through winter
Hetz Wintergreen A.A.	"Hetz Wintergreen"	F	Columnar-pyramidal	Narrow columnar form with single leader; dark green foliage
Pyramidal A.A.	"Pyramidalis"	S	Columnar-pyramidal	Bright green, soft textured foliage
Sunkist A.A.	"Sunkist"	S	Columnar-pyramidal	Yellow foliage
Techny Dark-Green A.A.	"Techny"; "Mission"	S	Columnar-pyramidal	Deep green foliage, year-round
Juniper, Chinese (C.J.)	Juniperus chinensis	S	Columnar-pyramidal	Dry soil; sun; blue-green foliage; rust resistant
Iowa C.J.	"Iowa"	S	Columnar-pyramidal	Dense columnar form; fruits
Mountbatten C.J.	"Mountbatten"	S	Columnar-pyramidal	Narrow, columnar form; large fruits
*Redcedar, Eastern (E.R.)	Juniperus virginiana	S	Columnar-pyramidal	Dry soil; sun; brownish winter color; susceptible to cedar-apple rust; salt tolerant
Burk E.R.	"Burkii"		Columnar-pyramidal	Fine-textured, gray-green foliage
Canaert E.R.	"Canaertii"	S	Columnar-pyramidal	Dark green, tufted foliage

B. EVERGREEN TREES (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
LOW TREES: 15 to 30 feet; plant at least 15 to 30 feet apart, depending on spread (continued)				
*Redcedar, Eastern (E.R.) (continued)				
Silver E.R.	"Glauca"	S	Columnar-pyramidal	Silver-gray foliage; informal habit
Hill Dundee E.R.	"Hillii"	S	Columnar-pyramidal	Gray-green foliage turns purple in winter; no fruits
Spruce, Black Hills	Picea glauca var. densata	S	Pyramidal	Dyr soil; sun; narrow, dense habit; salt-tolerant
Yew, Upright Japanese	Taxus cuspidata	S	Pyramidal	Shade; urban; deep green needles; often sold as T. cuspidata "capitata"

[a]*The following letters represent: S — Slow; M — Medium; and F — Fast.*

*Wisconsin native.

C. DECIDUOUS SHRUBS

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
TALL SHRUBS: 8 to 10 feet, sometimes 15 feet; plant at least 4 to 6 feet apart				
Beautybush	Kolkwitzia amabilis	F	Upright	Alkaline soil; sun; pink flowers in June; shredded bark; leggy
1. *Bladdernut, American	Staphylea trifolia	M	Upright	Moist soil; shade; whitish flowers; green to brown, bladder-like fruits; white-striped bark
Buckeye, Bottlebrush	Aesculus parviflora	M	Mounded	Moist soil; semi-shade; white flowers in July
Buffaloberry	Shepherdia argentea	M	Irregular	Dry soil; sun; yellowish flowers; dioecious; edible red fruits; silvery foliage; thorns
Cherry, Manchu; Nanking Cherry	Prunus tomentosa	S	Rounded	Dry soil; sun; white flowers; edible, red fruits
Cotoneaster, Manyflowered	Cotoneaster multiflorus	M	Mounded	Sun; well-drained soil; white flowers; red fruits; very wide-spreading; subject to fire blight
Dogwood, Corneliancherry (C.D.)	Cornus mas	M	Oval	Shade; urban; yellow flowers in April; flower buds may be injured or killed during some winters; edible red fruits
Golden Glory C.D.	"Golden Glory"	M	Upright	Darker green foliage
*Dogwood, Gray	Cornus racemosa	S	Erect	Dry or wet soil; shade; white flowers; white fruits; purple fall color
*Dogwood, Pagoda	Cornus alternifolia	M	Spreading	Moist soil; shade; white flowers; blue fruits; horizontal branches; early, maroon fall color
*Dogwood, Redosier (R.D.)	Cornus sericea	F	Spreading	Wet, moist soil; tolerates poor drainage; white flowers; white fruits; red twigs; often sold as C. stolonifera
Bailey R.D.	f. baileyi	F	Erect	Wet, moist soil; tolerates shade; bright red twigs
Yellowtwig R.D.	"Flaviramea"	F	Spreading	Yellow bark in winter
Euonymus, European (E.E.); Spindletree	Euonymus europaea	M	Tree-like	Dry soil; urban; striped bark; persistent, pink fruits; orange to purple fall color
Red Cap E.E.	"Red Cap"	M	Tree-like	Bright pink fruits
Euonymus, Winged; Burning Bush	Euonymus alata	S	Spreading	Sun or shade; well-drained soil; corky, winged twigs; pink to rose fall color
Forsythia, Meadowlark	Forsythia x "Meadowlark"	F	Upright	Sun; deep yellow flowers in April
Fringetree	Chionanthus virginicus	S	Spreading	Moist soil; shade; spidery white flowers; dioecious; blue fruits; coarse
Hydrangea, Peegee	Hydrangea paniculata "Grandiflora"	F	Upright	Moist soil; white to pink flowers in August; persistent, tan flower clusters
Lilac, Chinese	Syringa x chinensis	M	Vase	Dry, alkaline soil; purple-lilac flowers; fine-textured; good screening plant
Lilac, Common	Syringa vulgaris cvs.	M	Upright	Well-drained soil; sun; white, pink, lilac, purple, fragrant flowers; subject to mildew
Lilacs, Hyacinth	Syringa x hyacinthiflora cvs.	M	Upright	Sun; white, pink, lilac, purple flowers; early blooming

C. DECIDUOUS SHRUBS (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
TALL SHRUBS: 8 to 10 feet, sometimes 15 feet; plant at least 4 to 6 feet apart (continued)				
Lilac, Japanese Tree	Syringa reticulata	M	Tree-like	Sun; white flowers in June; tan fruits; cherry-like bark; often sold as S. amurensis japonica
Lilac, Preston	Syringa x prestoniae cvs.	M	Rounded	Sun; pink to purple flowers; late-blooming; coarse-textured; possible disease problem
Magnolia, Star	Magnolia stellata	S	Rounded	Rich soil; white flowers; orange fruits; finest-textured magnolia
Maple, Amur	Acer ginnala nana	M	Upright	Scarlet fall color
*Ninebark, Common	Physocarpus opulifolius	M	Vase	Dry soil; semi-shade; white flowers; red, capsular fruits; shredded bark; coarse
Peashrub, Siberian	Caragana arborescens	F	Erect-oval	Dry, alkaline soil; yellow flowers; greenish twigs; salt-tolerant
Pearlbush	Exochorda racemosa	M	Leggy	Sun; pearl-like flower buds
Plum, Double Flowering; Rose-Tree-of-China	Prunus triloba	S	Rounded	Sun; double, pink flowers; no fruit
Privet, Amur	Ligustrum amurense	F	Erect	Dry soil; white flowers; black fruits; hedge plant; salt-tolerant
Privet, Cheyenne	Ligustrum vulgare "Cheyenne"	F	Erect	Dry soil; urban; white flowers; black fruits; hedge plant
*Serviceberry; Juneberry (Also see Low Deciduous Trees)	Amelanchier spp.	S	Upright	Partial shade; alkaline soil; white flowers; edible purple fruits; smooth, gray bark; yellow to orange fall color; fire blight sometimes a problem
Serviceberry, Shadblow	Amelanchier canadensis	S	Upright	Moist soil; white flowers; black fruits
Smoketree (S.); Smokebush	Cotinus coggygria	M	Rounded	Sun; dry soil; pinkish "smoke-like" inflorescence; subject to verticillium wilt
Nordine Red S.	"Nordine Red"	M	Rounded	Purplish summer foliage
Royal Purple S.	*"Royal Purple"*	S	Upright	Purple foliage; reddish-purple fall color
*Sumac, Smooth	Rhus glabra	F	Suckering	Dry soil; sun; persistent red fruits; smooth stems; scarlet fall color; salt-tolerant
*Sumac, Staghorn (S.S.)	Rhus typhina	F	Suckering	Dry soil; sun; persistent red fruits; felty stems; orange to red fall color; salt-tolerant
Shredleaf S.S.; Cut Leaf S.S.	"Dissecta"	F	Picturesque	Dry soil; sun; red fruits; dissected leaves; orange to red in fall
Tamarisk (T.)	Tamarix ramosissima	F	Irregular-upright	Dry soil; sun; salt-tolerant; tiny, pink flowers; very fine-textured; often sold as T. pentandra
Cheyenne Red T.	"Cheyenne Red"	F	Irregular-upright	Deep reddish pink flowers
*Viburnum, American Cranberrybush	Viburnum trilobum	M	Upright	Moist soil; shade; lacy, white persistent
Viburnum, Arrowwood	Viburnum dentatum	M	Vase	Moist soil; shade; white flowers in June; blue fruits; maroon fall color
*Viburnum, Blackhaw	Viburnum prunifolium	S	Spreading	Partial shade; white flowers; black fruits; single- or multi-trunked; maroon fall color

C. DECIDUOUS SHRUBS (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
TALL SHRUBS: 8 to 10 feet, sometimes 15 feet; plant at least 4 to 6 feet apart (continued)				
Viburnum, Burkwood	Viburnum x burkwoodii	M	Upright	Moist, well-drained soil; partial shade; dark green foliage; wine-red fall color
Viburnum, European Cranberrybush	Viburnum opulus	M	Upright	Moist soil; lacy white flowers; persistent red fruits
*Viburnum, Nannyberry	Viburnum lentago	M	Upright	Moist or dry soil; sun or shade; white flowers; black fruits; leggy; maroon fall color; subject to mildew
Viburnum, Sargent	Viburnum sargentii	M	Upright	Lacy white flowers; persistent, red fruits; rough bark
Viburnum, Wayfaringtree (W.V.)	Viburnum lantana	M	Upright	Dry soil; shade; white flowers; red to black fruits; late maroon fall color
Mohican W.V.	"Mohican"	M	Upright	More compact with showier fruits
*Wahoo, Eastern	Euonymus atropurpurea	M	Tree-like	Moist soil; tiny purple flowers; orange to purple fall color
Willow, Goat; French Pussy Willow	Salix caprea	F	Oval	Wet or dry soil; sun; large, silver catkins in early spring
*Witchhazel, Common	Hamamelis virginiana	M	Spreading	Shade; yellow flowers in October; yellow fall color
Witchhazel, Vernal	Hamamelis vernalis	M	Rounded	Partial shade; well-drained soil; yellow flowers in February
MEDIUM SHRUBS: 5 to 8 feet; plant at least 3 to 4 feet apart				
Bayberry	Myrica pensylvanica	M	Upright	Dry soil; sun; gray, fragrant fruits; dioecious; semi-evergreen; suckering; salt-tolerant
Cherry, Purpleleaf Sand	Prunus x cistena	F	Rounded	Dry soil; sun; white flowers; purple foliage all season
Chokecherry, Red	Aronia arbutifolia	S	Erect	Wet soil; shade; tolerates poor drainage; white flowers; red fruits; red fall color
Cotoneaster, Hedge	Cotoneaster lucidus	M	Upright	Dry soil; partial shade; black fruits; orange to maroon fall color; good hedge plant; C. acutifolius is similar
Cotoneaster, Peking	Cotoneaster acutifolius	M	Upright-vase	Partial shade; black fruits; orange to maroon fall color; good hedge plant
Cotoneaster, Spreading	Cotoneaster divaricatus	M	Mounded	Dry, alkaline soil; red fruits; fine-textured; late maroon fall color; dies back in severe winters
Crabapple, Jewelberry	Malus "Jewelberry"	M	Spreading	Disease resistant; white flowers; persistent, 1/2" diam., red fruits; 8' mature height
Crabapple, Sargent (S.C.)	Malus sargentii	S	Spreading	Slightly susceptible to scab, fire blight and leafspot; white flowers; red fruits; 8' mature height
Tina S.C.	"Tina"	S	Spreading	Disease resistant; 5' mature height
Dogwood, Creamedge; Variegated Dogwood	Cornus alba "Argenteo-marginata"	F	Mounded	Moist soil; white flowers and fruits; variegated foliage with creamy-white margins; often sold as C. elegantissima
Dogwood, Isanti Red	Cornus sericea "Isanti"	F	Rounded	Moist soil; white flowers and fruits; bright red twigs; compact form; often sold as C. stolonifera

C. DECIDUOUS SHRUBS (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
MEDIUM SHRUBS: 5 to 8 feet; plant at least 3 to 4 feet apart (continued)				
Euonymus, Nordine Winged; Nordine Burning Bush	Euonymus alata "Nordine Strain"	S	Spreading	Sun or shade; pink and orange fruits; red fall color; often sold as "Koreana"
Dwarf Winged Euonymus; Dwarf Burning Bush	"Compacta"	S	Rounded	Sun or shade; small-winged branches; dense form; red fall color
Forsythia, Sunrise	Forsythia x "Sunrise"	F	Spreading	Sun; urban; large, deep yellow flowers in April
*Hazelnut; American Filbert	Corylus americana	M	Rounded	Dry soil; shade; catkins in March; orange fall color; edible nuts
Jetbead	Rhodotypos scandens	M	Spreading	Dry soil; shade; white flowers; black fruits in clusters of four
Lilac, Miss Kim	*Syringa patula* "Miss Kim"	S	Rounded	Sun; purple flowers; maroon autumn foliage; coarse
Lilac, Meyer; Palibin Lilac	Syringa meyeri "Palibin"	S	Rounded	Sun; purple flowers; dense; fine-textured; good informal hedge plant often sold as S. palibiniana
Lilac, Persian	Syringa persica	M	Upright	Sun; bluish-green foliage; lilac, purple flowers; susceptible to mildew
Mockorange, Glacier	Philadelphus x virginalis "Glacier"	F	Rounded	Sun; double, white, fragrant flowers
Mockorange, Lemoine	Philadelphus x lemoine cvs.	F	Upright	Sun; moist, well-drained soil; semi-dwarf; single white flowers
Privet, Golden Vicary	Ligustrum x vicaryi	M	Vase	Sun; bright yellowish-green foliage
Privet, Regel's Border	Ligustrum obtusifolium var. regelianum	F	Spreading	Dry soil; shade; white flowers; blue-black fruits; late, purple fall color
Rose, Father Hugo	Rosa hugonis	F	Vase	Poor soil; sun; yellow flowers; sparse red fruits; fine-textured
*Rose, Prairie; Climbing Rose	Rosa setigera	F	Sprawling-mounded	Sun; pink flowers in July; red fruits; orange fall color; can be used as a climber
Rose, Rugosa	Rosa rugosa cvs.	F	Rounded	Dry soil; sun; white, yellow, pink or red flowers; large, edible red fruits; salt-tolerant; includes "Grootendorst"
Spirea, Bridalwreath	Spiraea prunifolia	F	Vase	Sun; white flowers; arching branches
Spirea, Ural False	Sorbaria sorbifolia	F	Erect	Sun; fuzzy white flowers; suckering
Spirea, Vanhoutte	Spiraea x vanhouttei	F	Vase	Sun; white flowers; arching branches; salt-tolerant
Viburnum, Koreanspice	Viburnum carlesii	S	Rounded	Shade; urban; pink to white, fragrant flowers; blue-black fruits; red fall color
*Viburnum, Witherod	Viburnum cassinoides	M	Rounded	Wet, acid soil; tolerates poor drainage; white flowers; pink to red to blue fruits; red fall color
Weigela, Old-Fashioned; Cardinal Bush	Weigela florida	M	Spreading	Well-drained soil; pink, funnel-shaped flowers
Weigela, Red Prince	Weigela x "Red Prince"	M	Spreading	Well-drained soil; red flowers
Willow, Dwarf Arctic	Salix purpurea "Gracilis"	F	Rounded	Wet soil; sun; fine-textured silvery leaves; hedge plant
*Winterberry	Ilex verticillata	S	Upright	Wet, acid soil; tolerates poor drainage; dioecious (needs pollinator); red fruits

C. DECIDUOUS SHRUBS (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
LOW SHRUBS: 2 to 5 feet; plant at least 2½ to 3 feet apart				
Barberry, Japanese (J.B.)	Berberis thunbergii	M	Rounded	Dry soil; shade; red fruits; orange fall color; thorns; good hedge plant
Redleaf J.B.	var. atropurpurea	M	Rounded	Sun; red summer foliage
Crimson Pygmy J.B.	"Crimson Pygmy"	S	Low mound	Sun; red summer foliage; 2' tall
Rosy Glow J.B.	"Rosy Glow"	M	Rounded	Sun; rose-red-whitish leaves
Barberry, Korean	Berberis koreana	M	Upright	Sun; showy red fruits and autumn foliage; thorns; suckering; coarse
Box or Boxwood, Green Velvet	Buxus x "Green Velvet"	S	Rounded	Shade; broadleaf evergreen; good hedge plant; protection from severe low temperatures and winter winds
Box or Boxwood, Wintergreen Korean Littleleaf	Buxus sinica var. insularis "Wintergreen"	S	Rounded	Shade; broadleaf evergreen; good hedge plant; protection from severe low temperatures and winter winds
*Chokeberry, Glossy Black	Aronia melanocarpa var. elata	S	Suckering	Wet soil; shade; white flowers; black fruits; red fall color
*Cinquefoil, Bush; Potentilla (P.)	Potentilla fruticosa	S	Rounded	Dry soil; sun; blooms all summer
Abbotswood P.	"Abbotswood"	S	Rounded	White flowers; blue-green foliage
Gold Drop P.	"Gold Drop"; "Farrei"	S	Rounded	Yellow flowers; small green leaves
Goldfinger P.	"Goldfinger"	S	Rounded	Yellow flowers; yellow-green foliage
Jackman P.	"Jackmanii"	S	Rounded	Larger bright-yellow flowers; medium-green foliage; salt-tolerant
McKay's White P.	"McKay's White"	S	Rounded	Cream flowers; yellow-green foliage
Primrose Beauty P.	"Primerose Beauty"	S	Rounded	Pale-yellow flowers; silvery foliage
Cotoneaster, Cranberry	Cotoneaster apiculatus	S	Mounded	Dry soil; red fruits; red fall color
Cotoneaster, Rock	Cotoneaster horizontalis	M	Spreading	Sun; dark glossy green foliage; fishbone-pattern branches; reddish-purple fall color; bright red fruits
Coralberry, Indiancurrant; Buckbrush	Symphoricarpos orbiculatus	F	Suckering	Dry soil; shade; pink fruits; good bank cover
Currant, Alpine	Ribes alpinum	M	Rounded	Shade; urban; good hedge plant; salt-tolerant
Daphne, Burkwood (B.D.)	*Daphne x burkwoodii*	S	Rounded	Partial shade; well-drained soil; semi-evergreen; fragrant pinkish flowers
Carol Mackie B.D.	"Carol Mackie"	S	Rounded	Varigated leaves
Deutzia, Compact Lemoine	Deutzia x lemoinei "Compacta"	S	Rounded	Well-drained soil; white flowers
Floweringalmond, Pink Dwarf	Prunus glandulosa "Sinensis"	S	Rounded	Sun; well-drained soil; double, pink flowers; no fruits; narrow leaves
Floweringquince, Texas Scarlet	Chaenomeles x superba "Texas Scarlet"	M	Spreading	Dry soil; urban; red flowers; yellow, edible fruits; thornless; flower buds may be injured or killed during some winters
Forsythia, Bronx	Forsythia viridissima "Bronxensis"	S	Low mound	Sun; small yellow flowers; fine-textured; purple fall color
Honeysuckle, Clavey's Dwarf	Lonicera x xylosteoides "Clavey's Dwarf"	M	Rounded	Dense growth;. good hedge or screening plant

C. DECIDUOUS SHRUBS (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
LOW SHRUBS: 2 to 5 feet; plant at least 21/2 to 3 feet apart (continued)				
Honeysuckle, Clavey's Dwarf (continued)				
Emerald Mound Honeysuckle	"Emerald Mound"; "Nana"	M	Mounded	Rich, bluish-green foliage; dense, compact form
Miniglobe Honeysuckle	"Miniglobe"	S	Globe	Dense 2' globe
*Honeysuckle, Dwarf Bush	Diervilla lonicera	S	Mounded	Dry soil; shade; yellow flowers; good bank cover
Hydrangea, Annabelle Smooth	Hydrangea arborescens "Annabelle"	S	Mounded	Moist soil; shade; white, clustered flowers; dense; bloom on new wood
Snowhill Hydrangea	"Grandiflora"	S	Mounded	Smaller flower clusters and less dense than above
Mockorange, Golden	Philadelphus coronarius "Aureus"	S	Rounded	Sun; white flowers; yellow summer foliage
Ninebark, Dwarf Common	Physocarpus opulifolis "Nanus"	S	Rounded	Dry soil; shade; creamy-white flowers; red capsular fruits; shredded bark
Oregongrape, Mayhan	Mahonia aquifolium "Mayhan"	S	Suckering	Shade; urban; yellow flowers; blue fruits; holly-like evergreen foliage; needs shelter from winter sun and wind
Privet, Lodense	Ligustrum vulgare "Lodense"	S	Rounded	Dry soil; dense compact form; susceptible to blight
Rose, Virginia	Rosa virginiana	M	Suckering	Sun; pink flowers; persistent red fruits; red stems; good bank cover
*St. Johnswort, Kalm's	Hypericum kalmianum	S	Rounded	Dry soil; sun; yellow flowers; shiny brown twigs
*Serviceberry, Running	Amelanchier stolonifera	M	Suckering	Dry soil; shade; white flowers; edible fruits; orange fall color
*Snowberry	Symphoricarpos albus	F	Vase	Best in dry soil; shade; tiny pink flowers; showy white fruits; salt-tolerant; may be sold as S. rivularis
Spirea, Billiard	Spiraea x billiardii	M	Upright	Sun; pink flowers in July and August
Spirea, Bumalda (S.)	Spiraea x bumalda	M	Rounded	Dry soil; sun; summer flowering
Anthony Waterer S.	"Anthony Waterer"	M	Rounded	Raspberry-red flowers
Froebelii S.	"Froebelii"	M	Rounded	Pinkish flowers; coppery fall color
Goldflame S.	"Goldflame"	M	Rounded	Gold leaves; red-tipped young shoots; coppery fall color
Spirea, Grefsheim	Spiraea x cinerea "Grefsheim"	S	Mounded	Sun; white flowers in early May; fine-textured; may be sold as "Graciosa"
Spirea, Japanese (J.S.)	Spiraea japonica	S	Mounded	Sun; pale pink flowers in summer
Daphne J.S.	var. alpina	S	Mounded	Only 10 inches high with tiny flowers
Goldmound J.S.	"Goldmound"	S	Mounded	Gold summer foliage
Little Princess J.S.	"Little Princess"	S	Mounded	Pale pink flowers
Spirea, Japanese White	Spiraea albiflora	M	Mounded	Sun; white flowers in summer
Spirea, Snowmound	Spiraea nipponica "Snowmound"	S	Mounded	Sun; white flowere; blue-green foliage; possible disease problem
Stephanandra, Cutleaf	Stephanandra incisa "Crispa"	F	Mounded	Sun; well-drained, acid soil; excellent ground cover

C. DECIDUOUS SHRUBS (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
LOW SHRUBS: 2 to 5 feet; plant at least 21/2 to 3 feet apart (continued)				
*Sumac, Fragrant (F.S.)	Rhus aromatica	M	Mounded	Dry soil; sun; red fruits; fragrant foliage, turns orange-maroon in fall; salt-tolerant
Gro-Low F.S.	"Gro-Low"	M	Mounded	Uniform 2 1/2' height; glossy leaves
Viburnum, Compact European Cranberrybush	Viburnum opulus "Compactum"	S	Rounded	Partial shade; white flowers; persistent, red fruit; dense habit
Viburnum, Dwarf European Cranberrybush	Viburnum opulus "Nanum"	S	Globe	Shade; no flowers or fruits; twiggy
Viburnum, Dwarf Koreanspice	Viburnum carlesii "Compacta"	S	Rounded	Partial shade; dense, compact form; white, fragrant flowers; red fall color
Willow, Silver Creeping	Salix repens var. nitida	S	Spreading	Moist soil; sun; silvery foliage; ground cover
*Winterberry, Red Sprite	Ilex verticillata "Red Sprite"	S	Upright	Wet, acid soil, tolerates poor drainage; dioecious (needs pollinator); large red fruits

[a]*The following letters represent: S — Slow; M — Medium; and F — Fast.*

* Wisconsin native.

Appendix A (continued)

D. EVERGREEN SHRUBS

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
TALL SHRUBS: 8 to 10 feet, sometimes 15 feet; plant at least 6 to 8 feet apart, depending on spread				
Arborvitae, Ware; Siberian Arborvitae (Also see Low Evergreen Trees)	Thuja occidentalis "Wareana"	M	Broad-pyramidal	Moist soil, half-shade; a dark green foliage; may be sold as T.o. "Robusta"
Juniper, Chinese (C.J.)	Juniperus chinensis			Sun; well-drained soil
Ames C.J.	"Ames"	M	Broad-pyramidal	Bluish-green foliage
Fairview C.J.	"Fairview"	M	Narrow-pyramidal	Bluish-green foliage; silver berries
Hetz C.J.	"Hetzi"	F	Ascending-spreading	Silvery-blue foliage
Kettleer C.J.	"Kettleeri"	F	Broad-pyramidal	Green foliage
Robusta Green C.J.	"Robusta Green"	M	Broad-pyramidal	Tufted brilliant green foliage
Spartan C.J. (See also Low Evergreen Trees)	"Spartan"	F	Pyramidal	Rich green foliage
Juniper, Rocky Mountain; Colorado Redcedar	Juniperus scopulorum	S	Narrow-pyramidal	Sun; well-drained soil; bluish-green foliage
Blue Heaven Juniper (J.)	"Blue Heaven"	S	Narrow-pyramidal	Blue foliage; heavy cone bearer
Blue Wichita J.	"Wichita Blue"	S	Narrow-pyramidal	Silvery-blue foliage
Medora J.	"Medora"	S	Pyramidal	Blue foliage
Moffett J.	"Moffetti"	S	Pyramidal	Silvery-green foliage
Sutherland J.	"Sutherland"	S	Pyramidal	Green foliage
Welch J.	"Welch"	S	Narrow-pyramidal	Bluish-green foliage
MEDIUM SHRUBS: 2 to 8 feet; plant at least 4 to 6 feet apart, depending on spread				
Arborvitae (A.)	Thuja occidentalis			Moist soil; half-shade; green foliage
Globe A.	"Globosa"	S	Globular	Green foliage turns grayish-green in winter
Hetz Midget A.	"Hetz Midget"	S	Globular	Bright green foliage
Holmstrup A.	"Holmstrup"	S	Globular	Dark green foliage; compact
Rheingold A.	"Rheingold"	S	Mound	Golden foliage
Woodward Globe A.	"Woodwardii"	M	Globular	Bright green foliage
Juniper, Blue Star Singleseed	Juniperus squamata "Bluestar"	S	Mounded	Sun; blue foliage
Fishtail Juniper	"Meyeri"	S	Irregular-bushy	Bluish-white foliage
Juniper, Chinese (C.J.)	Juniper chinensis			Sun; well-drained soil
Blaauw C.J.	"Blaauw"	M	Upright-vase	Grayish-blue foliage
Blue Pfitzer Juniper	"Pfitzeriana Glauca"	F	Spreading	Bluish-gray foliage; no fruit
Gold Tip Pfitzer Juniper	"Pfitzeriana Aurea"	M	Spreading	Green foliage with gold tips
Maney C.J.	"Maney"	M	Upright-vase	Bluish-green foliage
Mint Julep C.J.	"Mint Julep"	S	Upright-bushy	Yellow-green foliage; also sold as "Sea Green"
Old Gold C.J.	"Old Gold"	M	Spreading	Green foliage with gold tips; bronze-gold foliage in winter; no fruits
Pfitzer Juniper	"Pfitzeriana"	F	Wide-spreading	Green foliage; no fruits; salt-tolerant

D. EVERGREEN SHRUBS (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
MEDIUM SHRUBS: 2 to 8 feet; plant at least 4 to 6 feet apart, depending on spread (continued)				
Juniper Chinese (C.J.) (continued)				
Schroeder Compact Juniper	"Pfitzeriana Compacta"	M	Spreading	Compact green foliage
*Juniper, Oldfield Common	Juniperus communis var. depressa	S	Spreading	Sun; well-drained soil; light green foliage turns brown in winter
Pine, Mugo	Pinus mugo var. mugo	M	Mounded	Sun; dry soil; green foliage
Spruce, Dwarf Alberta	Picea glauca "Conica"	S	Pyramidal	Shelter from winter sun; light-green foliage
Spruce, Nest	Picea abies "Nidiformis"	S	Spreading	Sun; grayish-green foliage; nest-like shrub
Yew, Anglojapanese	Taxus x media cvs.	S	Round or Upright	Shade; very dark green foliage; needs ideal conditions
Densiformis Yew (Y.)	"Densiformis"	M	Spreading	Bright green foliage; protected shady areas
Hicks Y.	"Hicksii"	S	Upright	Columnar with flat top; dark green foliage
Tauton Y.	"Tautonii"	S	Spreading	Most winter-burn-resistant cultivar
Ward Y.	"Wardii"	S	Spreading	Dense dark green foliage
Yew, Dwarf Japanese (J.Y.)	Taxus cuspidata "Nana"	S	Mounded	Shade; urban; very dark green foliage; needs ideal conditions
Intermedia J.Y.	"Intermedia"	S	Rounded	Dark green foliage
Spreading J.Y.	"Expansa"	S	Spreading	Shade; urban; very dark green foliage; needs ideal conditions
LOW SHRUBS: 6 to 24 inches; plant at least 4 to 6 feet apart, depending on spread				
Juniper, Chinese	Juniper chinensis			Sun; well-drained soil
Japanese Garden Juniper	var. procumbens	S	Creeping	Bluish-green foliage year-round
Dwarf Japanese Garden Juniper	"Nana"	S	Creeping	Dwarf and dense
Kallay's Compact Pfitzer Juniper	"Kallay's Compact"	M	Spreading	Pale green foliage
Sargent Juniper	var. sargentii	M	Creeping	Green or bluish-green foliage in "Glauca" cultivar
Juniper, Petite Common	Juniperus communis "Petite"	M	Creeping	Dense; compact; fruits
Creeping Common Juniper	"Repanda"	M	Creeping	Sun; green foliage in winter
*Juniper, Creeping (J.)	Juniperus horizontalis	M	Creeping	Dry soil; variable color-brown in winter; subject to blight disease
Bar Harbor J.	"Bar Harbor"	M	Creeping	Bluish-green foliage turning purple in winter
Blue Chip J.	"Blue Chip"	M	Creeping	Blue foliage year-round
Blue Rug J.	"Wiltonii"	M	Flat-trailing	Silvery-blue foliage and fruits
Hughes J.	"Hughes"	M	Spreading	Silvery-blue foliage; radial branching habit
Webber J.	"Webberi"	M	Creeping	Bluish-green foliage; mat-like
Wisconsin J.	"Wisconsin"	M	Creeping	Bluish-green foliage turning steel blue in winter
Youngstown J.; Andorra J.	"Youngstown"	M	Radial-creeping	Grayish-green foliage turning purple in winter

D. EVERGREEN SHRUBS (continued)

Common Name	Botanical Name	Growth Rate[a]	Form	Remarks
LOW SHRUBS: 6 to 24 inches; plant at least 4 to 6 feet apart, depending on spread (continued)				
Juniper, Savin	Juniperus sabina			Sun; well-drained soil
Broadmoor Juniper (J.)	"Broadmoor"	S	Mounded	Soft grayish-green foliage; fine-textured
Buffalo J.	"Buffalo"	S	Low-spreading	Bright green foliage; fine-textured
Calgary Carpet J.	"Calgary Carpet"	S	Low-spreading	Soft green foliage

[a]*The following letters represent S — Slow; M — Medium; and F — Fast.*

*Wisconsin Native.

E. GROUNDCOVERS

Common Name	Botanical Name	Growth Rate[a]	Remarks
GROUNDCOVER			
Archangel, Yellow	Lamiastrum galeobdolon 'Variegatum'	M	Partial shade; herbaceous; yellow flowers; aggressive; 12" to 18" height
Bishop's Hat	Epimedium spp.	F	Rich soil; shade; herbaceous; yellow or red flowers; 1' height
Bugleweed	Ajuga reptans and cvs.	F	Moist soil; shade; white, red, purple, or blue flowers; evergreen foliage; 4" to 6" height
Cinquefoil, Cushion	Potentilla verna nana	M	Sun; well-drained soil; small yellow-green foliage; yellow flowers; 3" height
Cotoneaster, Cranberry	Cotoneaster apiculatus	S	Dry soil; sun; red fruits; herringbone pattern branches; red fall color; 2' height
Crownvetch	Coronilla varia	S	Dry, alkaline soil; sun; pink and white flowers; good bank cover; aggressive; not for refined areas; 1' to 2' height
Daylily	Hemerocallis cvs.	M	Partial shade; showy flowers; herbaceous; 1' to 3' height
Deadnettle, Spotted	Lamium maculatum cvs.	F	Shade; variegated leaves; pink or white flowers; aggressive; 6" to 8" height
Euonymus, Purpleleaf Wintercreeper (Also see Vines—Bigleaf Wintercreeper.)	Euonymus fortunei 'Colorata'	F	Shade; evergreen leaves turn purple in winter; needs shelter from winter sun and wind; 6" to 18" height
Fleeceflower, Low Japanese	Polygonum cuspidatum var. compactum	F	Dry soil; herbaceous; pink flowers; red fruits; red fall color; aggressive; often sold as P. reynoutria; 1' to 2' height
Goutweed, Silveredge; Snow-on-the-Mountain; Bishop's Weed	Aegopodium podagraria 'Variegatum'	F	Sun or shade; herbaceous; variegated foliage; aggressive; 1' height
*Honeysuckle, Dwarf Bush	Diervilla lonicera	M	Dry soil; shade; yellow flowers; 3' height.
Ivy, Bulgarian	Hedera helix 'Bulgaria'	F	Shade; broadleaf evergreen; needs shelter from winter sun and wind; 6" to 8" height
Juniper (See Low Evergreen Shrubs; 6" to 24" height.)	Juniperus spp.	F	Dry soil; sun; needled evergreen; 6" to 24" height
Lily, Plantain; Funkia	Hosta cvs.	M	Shade; green, blue, gold, and variegated leaves; white or lavender flowers; 6" to 24" height
Lily-of-the-Valley	Convallaria majalis	F	Shade; moist soil; herbaceous; small, fragrant, white flowers; dark green foliage; 8" height
Pachysandra, Japanese (J.P.); Japanese Spurge	Pachysandra terminalis	S	Moist soil; shade; evergreen foliage; needs shelter from winter sun and wind; 6" to 8" height
Green Carpet J.P.	'Green Carpet'	S	*Lower growing; glossier leaves; 6" height*
Paxistima, Canby	Paxistima canbyi	S	Shade; tiny, holly-like, evergreen leaves; 1' height
Periwinkle; Myrtle	Vinca minor and cvs.	M	Shade; blue flowers in May; broadleaf evergreen; 6" height
Phlox, Moss	Phlox subulata and cvs.	M	Sun; dry, infertile soil; small, clustered, pink or white flowers; needle-like, semi-evergreen leaves; good bank cover; 6" height
Stephanandra, Cutleaf	Stephanandra incisa 'Crispa'	F	Sun; well-drained, acid soil; fine-textured; 3' height
Stonecrop; Sedum	Sedum spp.	M	Dry, infertile soil; sun; rock gardens; succulent; 2" to 8" height
Strawberry, Barren	Waldsteinia ternata	M	Partial shade; herbaceous; yellow flowers; 4" to 6" height
Sumac, Gro-Low Fragrant	Rhus aromatica 'Gro-Low'	M	Dry soil; sun; orange-maroon fall color; 2½' height

E. GROUNDCOVERS

Common Name	Botanical Name	Growth Rate[a]	Remarks
GROUNDCOVER (continued)			
Trefoil, Bird's-foot	Lotus corniculatus	M	Wet, acid soil; sun; tolerates poor drainage; yellow flowers; good bank cover; not for refined areas; 1' to 2' height
*Wildginger, Canada	Asarum canadense	M	Rich soil; shade; large, heart-shaped leaves; 6" height
Woodruff, Sweet	Galium odoratum	F	Shade; herbaceous; white flowers; fine-textured; 6" to 8" height

[a]*The following letters represent S — Slow; M — Medium; and F — Fast.*

*Wisconsin native.

Appendix A (continued)

F. VINES

Common Name	Botanical Name	Growth Rate[a]	Means of Support	Remarks
VINE				
Akebia, Fiveleaf	Akebia quinata	M	Twining	Shade; bluish-green leaves in the summer; rosy-purple flowers; purple fruits
*Bittersweet, American	Celastrus scandens	F	Twining	Dry soil; shade; yellow and red terminal fruit clusters; dioecious; plant both sexes
Bittersweet, Oriental	Celastrus orbiculatus	F	Twining	Dry soil; shade; small, orange-yellow fruits
Clematis (C.)	Clematis cvs.			Cool, alkaline soil; large, showy flowers of many colors; select cvs. that bloom on current season's growth
Ernest Markham C.	"Ernest Markham"	F	Twining petioles	Large red flowers
Henryi C.	"Henryi"	F	Twining petioles	Creamy white flowers
Jackman C.	Clematis x jackmanii	F	Twining petioles	Purple flowers
Nelly Moser C.	"Nelly Moser"	F	Twining petioles	Mauve-pink flowers
Ramona C.	"Ramona"	F	Twining petioles	Blue flowers
Clematis, Sweet Autumn	Clematis maximowicziana	F	Twining petioles	Semi-shade; small, white flowers in September; often sold as C. paniculata
Creeper, Engelmann Virginia; Woodbine	Parthenocissus quinquefolia "Engelmannii"	F	Holdfasts and tendrils	Shade or sun; finer textured than the species; blue fruits; red fall color; salt-tolerant
Dutchmanspipe	Aristolochia durior	M	Twining	Shade; curious flowers; huge leaves; good screen
Euonymus (E.), Bigleaf Wintercreeper	Euonymus fortunei var. vegeta	F	Aerial rootlets	Shade; broadleaf evergreen; needs shelter from winter sun and wind
Emerald Gaiety E.	"Emerald Gaiety"	F	Aerial rootlets	Deep green leaves with white margins
Emerald and Gold E.	"Emerald and Gold"	F	Aerial rootlets	Deep green leaves with yellow margins
Emerald Pride E.	"Emerald Pride"	F	Aerial rootlets	Dark green foliage; compact, close branching habit
Sarcoxie E.	"Sarcoxie"	F	Aerial rootlets	Upright form; glossy green foliage with whitish veins
Fleecevine, Silver; Silver Lace Vine	Polygonum aubertii	F	Twining	Sun; small, clustered, white flowers in September
Grape	Vitis spp. and cvs.	F	Tendrils	Sun; edible fruits
Honeysuckle, Dropmore Scarlet	Lonicera x brownii "Dropmore Scarlet"	F	Twining	Shade or sun; red flowers all season; red fruits; subject to aphids
Honeysuckle, Everblooming; Goldflame Honeysuckle	Lonicera heckrottii	F	Twining	Shade or sun; pink and yellow flowers; subject to aphids
Hydrangea, Climbing	Hydrangea anomala spp. petiolaris	S	Aerial rootlets	Shade; moist soil; white flowers; exfoliating cinnamon bark
Ivy, Boston; Japanese Creeper	Parthenocissus tricuspidata	F	Holdfasts	Shade; blue fruits; maroon fall color.
Veitch Boston Ivy	"Veitchii"	F	Holdfasts	Fine-textured; less aggressive than the species; young leaves purple
Kiwi, Arctic Beauty; Kolomikta Actinidia	Actinidia kolomikta	F	Twining	Sun; pink and white blotches on leaves; dioecious; plant both sexes

Appendix A (continued)

F. VINES (continued)

Common Name	Botanical Name	Growth Rate[a]	Means of Support	Remarks
VINE (continued)				
Trumpetcreeper; Trumpetvine	Campsis radicans	F	Aerial rootlets	Moist soil; sun; orange to red, trumpet-shaped flowers; suckering
Wisteria, Kentucky	Wisteria macrostachya	M	Twining	Sun; drooping lavender flower clusters

[a]The following letters represent S — Slow; M — Medium; and F — Fast.

*Wisconsin native.

Source: E. R. Hasselkus, A Guide to Selecting Landscape Plants for Wisconsin, Madison, WI, University of Wisconsin-Extension, 1991; Michael A. Dirr, Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses, Champaign, IL, Stipes Publishing Company, Fourth Edition, 1990; Richard D. Schein, Street Trees: A Manual for Municipalities, State College, PA, Treeworks, 1993; Henry D. Gerhold, Willet N. Wandell, Norman L. Lacasse, Street Tree Factsheets, University Park, PA, Pennsylvania State University, 1993; and SEWRPC.

Appendix B

SUGGESTED ARCHITECTURAL REVIEW GUIDELINES FOR THE KEWASKUM CENTRAL BUSINESS DISTRICT

The architectural compatibility of buildings located in a central business district is of critical public concern. A review committee, established in accordance with Section 62.23(7) of the Wisconsin Statutes, may review proposed building designs and site plans to avoid development that is incompatible with a central business district and may have adverse impacts on the character of the central business district. The development or redevelopment of buildings should be consistent with the general intents and purposes of promoting the public health, safety, and general welfare; maintaining the good appearance of the central business district; and promoting development and redevelopment of buildings consistent with the adopted community master plan for the Village or components thereof. Architectural review guidelines for buildings are set forth herein for the specific purpose of promoting an attractive central business district, compatible development, and stability of property values. These guidelines may be formalized in the form of a zoning ordinance or may be used as voluntary guidelines.

The following guidelines are established for these purposes and are intended to apply to all new buildings and to changes or additions to existing buildings in the Kewaskum Central Business District (CBD).

1. The proportions, scale, and mass of a building relative to its neighboring existing buildings, to pedestrians or observers, or to other existing buildings shall be maintained or enhanced when new buildings are built or when existing buildings are remodeled or altered.

2. The visual continuity of roofs, rooflines, and their contributing elements (e.g. parapet walls, coping, and cornices) shall be maintained in building development or redevelopment.

3. No building shall be permitted whose design or exterior appearance is of such unorthodox or abnormal character in relation to its surroundings as to be unsightly or offensive to generally accepted taste and community standards.

4. No building design or exterior appearance shall be permitted to be repeated to the extent that excessive monotony or drabness results.

5. No building shall be permitted where any exposed facade is constructed or faced with finished material which is aesthetically incompatible with the other facades and presents an unattractive appearance to the public and to surroundings properties.

6. All building exteriors shall be brick, decorative masonry, glass panel, or other appropriate finished material as may be approved by the review committee. All faces of buildings shall be kept in good repair and appearance at all times. All buildings shall be of approved construction in conformance with all applicable building codes.

7. Since the selection of building colors has a significant aesthetic and visual impact on the public and neighboring properties, colors shall be selected to be in general harmony with the existing neighborhood buildings.

8. Accessory buildings shall be built with materials compatible with those of the principal building on the same site.

9. No overhead doors on commercial, manufacturing, institutional, or park buildings shall face a public street. The review committee may permit overhead doors to face a public street when it has made a finding that there is no feasible alternative location for such doors.

10. Heating, air conditioning, and ventilating equipment on buildings shall be screened from view or located in a manner that is unobtrusive.

11. No building shall be permitted to be sited on the property in a manner which would unnecessarily destroy or substantially damage the natural beauty of the area, particularly insofar as it would adversely affect values incidental to ownership of land in that area, or which would unnecessarily have an adverse effect on the beauty and general enjoyment of existing buildings on adjoining properties.

12. No building shall be permitted that would have a negative impact on the maintenance of safe and healthful conditions in the Village.

13. Building layout and design shall maintain existing topography, drainage patterns, and vegetative cover insofar as is practical to prevent indiscriminate or excessive earth moving or clearing of property, disfiguration of natural land forms, and disruption of natural drainage patterns.

14. Buildings shall be provided with adequate public services as approved by the appropriate utility.

15. No buildings shall impair the enjoyment of historic attractions and areas of significant historic interest.

16. Buildings and signs within the Kewaskum CBD shall be designed and sited in accordance with adopted design standards for this District.

17. Buildings on premises which have historical significance shall be identified by a plaque to be provided by the Village and should be encouraged to be maintained or restored insofar as is practicable in a manner which will protect its historical significance in accordance with the standards promulgated by the U. S. Department of the Interior for historic preservation projects. Buildings listed on the list of national and state register of historic places shall be required to follow these standards.

18. Buildings shall be consistent with the public goals, objectives, principles, standards, policies, and urban design guidelines set forth in the Village adopted community master plan or component thereof related to the Kewaskum Central Business District.

Appendix C

RESOLUTION OF THE VILLAGE OF THE KEWASKUM PLAN COMMISSION ADOPTING THE THE VILLAGE OF KEWASKUM RECOMMENDED LAND USE AND STREET SYSTEM PLANS

Resolution No. 97-9

A VILLAGE PLAN COMMISSION RESOLUTION FOR ADOPTING THE VILLAGE OF KEWASKUM LAND USE AND STREET SYSTEM PLANS

WHEREAS, the Village of Kewaskum, pursuant to the provisions of Sections 61.35 and 62.23 of the Wisconsin Statutes, has created a Village Plan Commission; and

WHEREAS, it is the duty and function of the Village Plan Commission, pursuant to Section 62.23(2) of the Wisconsin Statutes, to make and adopt a master plan for the physical development of the Village of Kewaskum; and

WHEREAS, the Village of Kewaskum requested the Southeastern Wisconsin Regional Planning Commission to prepare a land use plan and a street system plan for the Village, which plans include:

1. Collection, compilation, processing and analyses of various types of demographic, economic, natural resource, historic resource, recreation and open space, land use, transportation and other information pertaining to the Village;

2. A forecast of growth and change;

3. Statements of development objectives, principles, standards and related urban design guidelines;

4. A land use plan and a street system plan;

5. Recommendation of activities to implement the plans; and

WHEREAS, the aforementioned forecasts; inventories; analyses; objectives, principles, standards, and related urban design guidelines; a land use plan and a street system plan; and implementation recommendations are set forth in a published report entitled SEWRPC Community Assistance Planning Report No. 214, A Land Use and Street System Plan for the Village of Kewaskum: 2010, Washington County, Wisconsin; and

WHEREAS, the Village of Kewaskum Plan Commission has held public meetings to acquaint residents, landowners, and local government officials with the plan recommendations, including a public informational meeting held on the 3rd day of June, 1997, and a public hearing held on the 10th day of June, 1997; and

WHEREAS, the Village Plan Commission has carefully considered the plans over an extended period of time, including statements and requests during the planning process, and has proceeded to incorporate, where deemed appropriate, changes to the recommended land use plan and street system plan; and

WHEREAS, the Village Plan Commission considers the plans to be a necessary guide to the future development of the Village and environs;

NOW, THEREFORE, BE IT RESOLVED, that pursuant to Section 62.23(3)(b) of the Wisconsin Statutes, the Village of Kewaskum Plan Commission on the 10th day of June, 1997, hereby adopts the SEWRPC Community Assistance Planning Report No. 214, entitled A Land Use and Street System Plan for the Village of Kewaskum: 2010, Washington County, Wisconsin, and the attendant recommended land use plan and street system plan as a guide for the future development of the Village of Kewaskum and surrounding environs.

BE IT FURTHER RESOLVED, that the Secretary of the Village of Kewaskum Plan Commission transmit a certified copy of this resolution, after recording the action on the adopted plans, to the Board of Trustees of the Village of Kewaskum and to the Southeastern Wisconsin Regional Planning Commission.

Robert H. Wagner/President

ATTEST:

Daniel S. Schmidt/Administrator/Clerk

Introduced by Trustee Charles Waala
Motion for adoption by Trustee Richard Schmidt
Motion for adoption seconded by Trustee Frank Beesten
Roll Call Vote was 6 "Aye," 1 "Nay," 0 "Absent"

Commission Member Kenneth Bonlender voting Nay

Appendix D

RESOLUTION OF THE BOARD OF TRUSTEES OF THE VILLAGE OF KEWASKUM ADOPTING THE VILLAGE OF KEWASKUM RECOMMENDED LAND USE AND STREET SYSTEM PLANS

Resolution No. 97-14

A VILLAGE BOARD RESOLUTION FOR ADOPTING THE VILLAGE OF KEWASKUM LAND USE AND STREET SYSTEM PLANS

WHEREAS, the Village of Kewaskum, pursuant to the provisions of Sections 61.35 and 62.23 of the Wisconsin Statutes, has created a Village Plan Commission; and

WHEREAS, the Village Plan Commission has prepared, with the assistance of the Southeastern Wisconsin Regional Planning Commission (SEWRPC), a plan for the physical development of the Village of Kewaskum and environs, said plan embodied in SEWRPC Community Assistance Planning Report No. 214, A Land Use and Street System Plan for the Village of Kewaskum: 2010, Washington County, Wisconsin; and

WHEREAS, the Village Plan Commission, on the 23rd day of June, 1997, adopted SEWRPC Community Assistance Planning Report No. 214 and the attendant recommended land use plan and street system plan and has submitted a certified copy of that resolution to the Board of Trustees of the Village of Kewaskum; and

WHEREAS, the Board of Trustees of the Village of Kewaskum concurs with the Village Plan Commission and the objectives and policies set forth in SEWRPC Community Assistance Planning Report No. 214;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Trustees of the Village of Kewaskum hereby adopts SEWRPC Community Assistance Planning Report No. 214 and the attendant recommended land use plan and street system plan as a guide for the future development of the Village of Kewaskum and surrounding environs; and

BE IT FURTHER RESOLVED, that the Village Plan Commission shall annually report to the Village Board on all amendments to the land use plan and street system plan adopted by the Plan Commission; and

BE IT FURTHER RESOLVED, that the Village shall review the Village of Kewaskum Land Use and Street System Plans every five years or even more frequently, if necessary, and shall recommend extensions, changes, or additions to the Plans which the Plan Commission considers necessary. Should the Village Plan Commission find that no changes are necessary, this shall be reported to the Village Board.

PASSED, ADOPTED AND APPROVED this 23rd day of June, 1997, by the Kewaskum Village Board.

Robert H. Wagner/President

ATTEST:

Daniel S. Schmidt/Administrator/Clerk

Introduced by Trustee Gary Gavin
Motion for adoption by Trustee John Kenworthy
Motion for adoption seconded by Trustee Harry Roecker
Roll Call Vote was 6 "Aye," 0 "Nay," 1 "Absent"