



# A LAND USE, URBAN DESIGN, AND TRANSPORTATION PLAN FOR SELECTED ARTERIAL STREET CORRIDORS IN THE VILLAGE OF HALES CORNERS

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**COMMUNITY ASSISTANCE PLANNING REPORT  
NUMBER 195**

**A LAND USE, URBAN DESIGN, AND  
TRANSPORTATION PLAN FOR SELECTED ARTERIAL  
STREET CORRIDORS IN THE VILLAGE OF HALES CORNERS  
MILWAUKEE COUNTY, WISCONSIN**

Prepared by the  
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May 1993

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May 3, 1993

The Honorable James R. Ryan  
President of the Village of Hales Corners  
and Members of the Village  
Board and Plan Commission  
5635 S. New Berlin Road  
Hales Corners, Wisconsin 53130

Ladies and Gentlemen:

By letter dated March 18, 1988, the Village of Hales Corners requested that the Southeastern Wisconsin Regional Planning Commission assist the Village in the preparation of land use, urban design, and transportation system plans for the three major arterial street corridors, 108th Street (STH 100 and USH 45), Janesville Road (STH 24), and Forest Home Avenue (STH 24/CTH OO), through the Village. The planning effort was initiated in 1989 and the Regional Planning Commission staff, working with the staff, officials, and advisory committee of the Village, has now completed the requested plans, presented in this report.

In addition to setting forth an adopted land use plan and supporting plan implementation devices for the corridors concerned, this report presents pertinent information on the principal factors affecting development and redevelopment along the corridors concerned, including existing and probable future resident population and employment levels, the natural resource base, historic land uses, and existing local plan implementation devices. The plans also include a set of recommended development objectives, together with supporting principles, standards, and urban design criteria. The locally preferred land use plan and attendant urban design and transportation system plans adopted by the Village Board and Plan Commission are intended to serve as a point of departure in the making of day-to-day development decisions by Hales Corners officials and as a basis for developing more detailed plans and plan implementation devices over time.

The staff of the Regional Planning Commission appreciates the assistance provided by the staff and officials of the Village and the Corridor Plan Advisory Committee in the preparation of these plans. The Commission staff stands ready to assist the Village in implementing the adopted plans over time.

Sincerely,



Kurt W. Bauer  
Executive Director

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## Chapter I

### INTRODUCTION

#### INTRODUCTION

In April 1988, the Village of Hales Corners requested that the Southeastern Wisconsin Regional Planning Commission (SEWRPC) assist the Village Plan Commission in the development of a land use, urban design, and transportation plan for three arterial street corridors through the Village. This report sets forth the findings and recommendations of the planning effort undertaken in response to this request.

The planning effort involved extensive inventories and analyses of the factors and conditions affecting development within the individual corridor, including the preparation of projections of the possible range of future population and economic activity levels; extensive inventories of pertinent characteristics of the natural and cultural resource base, including inventories of sites and buildings of historic value within the Corridor; an inventory of existing local plan implementation devices; the formulation of objectives, principles, standards, and related urban design criteria for the Corridor; careful analyses of the inventory findings; and the preparation of a recommended land use plan, urban design plan, and transportation plan for the Corridor. The work also includes suggested amendments to the Village of Hales Corners zoning ordinance which would help to carry out better the recommended land use plan, urban design plan, and transportation plan.

#### THE CORRIDOR STUDY AREA

The arterial street corridor study area within the Village of Hales Corners is located in the southwest central portion of Milwaukee County as shown on Map 1. As shown further on Map 2, the Corridor encompasses an area of approximately 722 acres, or about 1.1 square miles, consisting of 108th Street (USH 45, STH 100), Janesville Road (STH 24), and Forest Home Avenue (STH 24 and CTH 00). The study area contains parts of U. S. Public Land Survey Sections 29 through 32, Township 6 North, Range 21 East.

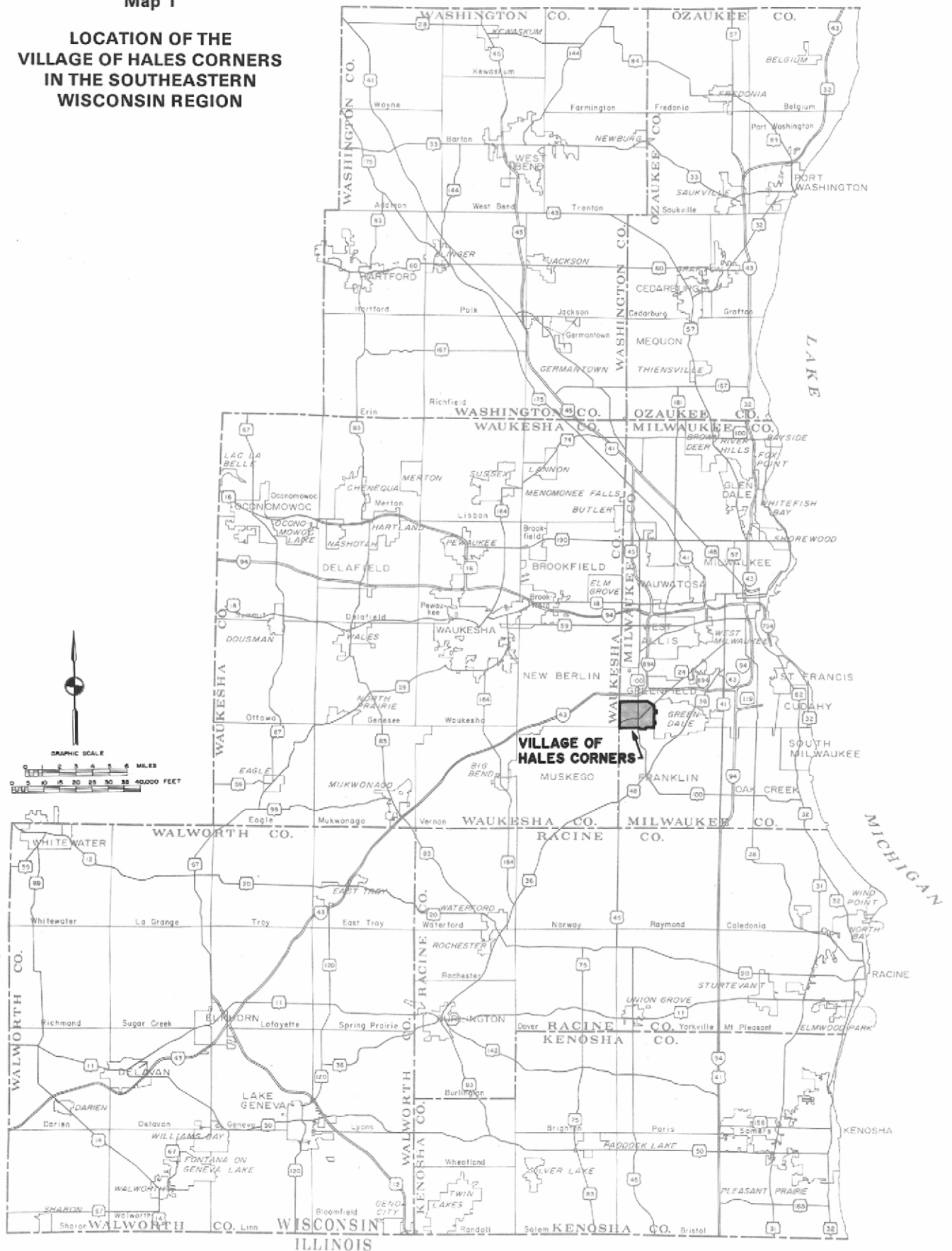
#### PLANNING INFLUENCES

The Southeastern Wisconsin Regional Planning Commission is the official areawide planning agency for the seven-county Southeastern Wisconsin Region, which includes Milwaukee County and the Village of Hales Corners. The Commission has, since its creation in 1960, pursued the preparation of an advisory plan for the physical development of the Region through the systematic completion and adoption of those elements of such a plan perceived to be important to the units and agencies of government operating within the Region. Selected salient recommendations of the adopted regional land use, park and open space, and transportation plan elements applicable to the arterial street corridor concerned are shown on Map 3.

Several of the adopted regional plan elements are particularly important to the preparation of development plans for the Corridor. These elements are described in the following SEWRPC reports: SEWRPC Planning Report No. 25, A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000, which contains recommendations for areawide land use and transportation system development and provides an important basis for detailed development planning in the Corridor study area; SEWRPC Planning Report No. 27, A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000, which contains recommendations for park and open space reservation and development; SEWRPC Planning Report No. 30, A Regional Water Quality Management Plan for Southeastern Wisconsin—2000, which contains recommendations for the treatment of sanitary sewage, the size of sewage treatment plants, and the location and extent of sanitary sewer service areas; SEWRPC Community Assistance Planning Report No. 121, A Stormwater Management Plan for the Village of Hales Corners, which contains recommendations for alleviating existing stormwater drainage problems in the Village; SEWRPC Planning Report No. 9, A Comprehensive Plan for the Root River Watershed, which contains informa-

Map 1

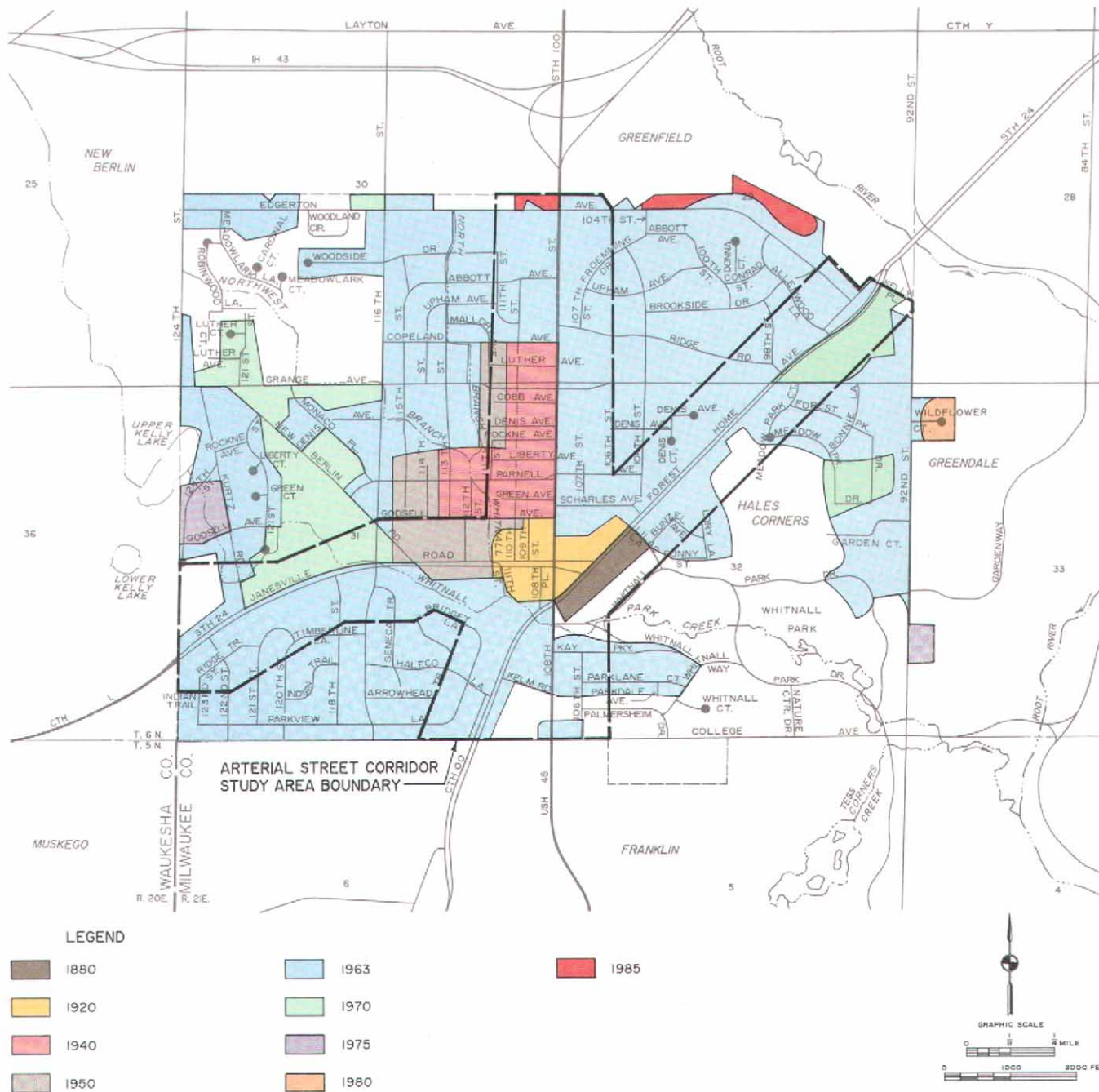
**LOCATION OF THE  
VILLAGE OF HALES CORNERS  
IN THE SOUTHEASTERN  
WISCONSIN REGION**



Source: SEWRPC.

Map 2

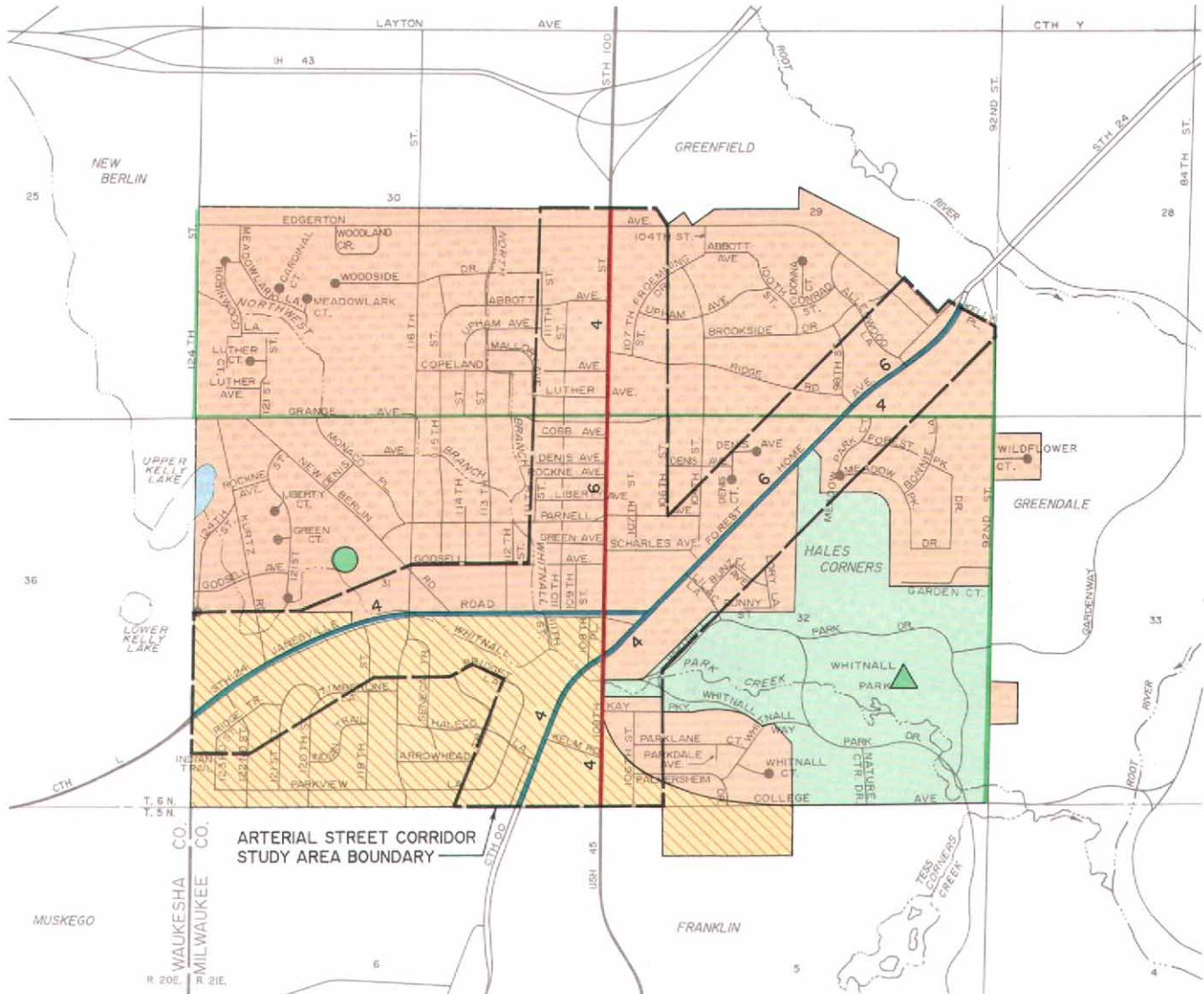
LOCATION OF THE ARTERIAL STREET CORRIDOR STUDY AREA AND  
HISTORIC URBAN GROWTH (1880-1985) IN THE VILLAGE OF HALES CORNERS



Source: SEWRPC.

Map 3

**SELECTED ELEMENTS OF THE REGIONAL LAND USE, PARK AND OPEN SPACE,  
AND TRANSPORTATION PLANS FOR THE VILLAGE OF HALES CORNERS: 2000**



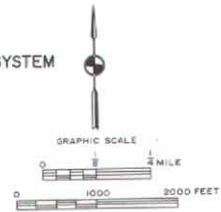
**LEGEND**

- LOW DENSITY RESIDENTIAL (0.7 - 2.2 DWELLING UNITS PER NET RESIDENTIAL ACRE)
- MEDIUM DENSITY RESIDENTIAL (2.3 - 6.9 DWELLING UNITS PER NET RESIDENTIAL ACRE)
- EXISTING MAJOR PUBLIC PARK SITE - TYPE I (250 OR MORE ACRES)

- EXISTING MAJOR PUBLIC PARK SITE - TYPE III (25 - 99 ACRES)
- PRIMARY ENVIRONMENTAL CORRIDOR
- SURFACE WATER AREA

**ARTERIAL STREET AND HIGHWAY SYSTEM**

- STATE TRUNK
- COUNTY TRUNK
- LOCAL TRUNK
- NUMBER OF TRAFFIC LANES (2 WHERE UNNUMBERED)



Source: SEWRPC.



tion on flooding along the Root River along with other hydrologic and hydraulic data pertinent to the sound development of the arterial street corridor.

A comprehensive recreation plan, described in a report entitled An Outdoor Recreation Plan for the Village of Hales Corners, Wisconsin—1973, was prepared by the Wisconsin Department of Natural Resources, Bureau of Planning. The report included an inventory of existing recreation areas and programs; a determination of service areas of existing recreation sites; a review of plans and proposals of public agencies and private groups that would affect recreation opportunities in the Village; a review of soils and drainage data; a field analysis of existing and potential recreation sites; and an evaluation of the accessibility of existing and potential recreation sites.

Actions recommended in the report include: 1) amendment of the zoning ordinance of the Village to provide a zoning district which can be used to preserve and protect environmentally sensitive areas, 2) provision of a park, called Schoetz Park at present, in a portion of a 160-acre area bounded by Grange and Edgerton Avenues and S. 116th and S. 124th Streets, 3) provision of neighborhood parks in the area north of Grange Avenue between S. 108th and S. 113th Streets and in the area north of Grange Avenue east of S. 108th Street, 4) provision of recreational facilities in Cobb Park, such as a path for walking and bicycling, and expansion of the eastern end of the park to connect its linear corridor with the western entrance of Whitnall Park, 5) establishment of a bicycle route system in the Village; 6) reduction of the negative visual impact of the power transmission line towers by relocating them to a less visible location or changing them to more attractive steel poles; 7) acquisition of a parcel of land at the Hales Corners sewage treatment plant when that plant is abandoned; 8) supporting the Hales Corners Historical Society in identifying and preserving structures and artifacts of local historic interest; and 9) establishment of a Parks and Recreation Commission and a full-time paid position of Director of Parks and Recreation. Recommendations 2, 7, and 8 have been substantially implemented.

The findings and recommendations of the aforementioned regional, subregional, and local plan elements all have important implications for any

study of the Corridor. Pertinent recommendations of these plan elements are reflected in the plans presented herein and are further considered in the inventory and analysis sections of this document.

## STUDY PURPOSE

The primary purpose of this planning effort is to provide the Village of Hales Corners with a plan that will implement the goal of the Village of Hales Corners to provide coordinated, harmonious development and redevelopment within Hales Corners' commercial corridors. These are the areas where most future development and redevelopment may be expected to occur in the Village. The land use plan, urban design plan, and transportation plan, while primarily intended to meet local development objectives, are also intended to carry related regional plan elements into greater depth and detail as necessary for both sound local and regional planning. In conducting this planning effort, an effort was made to identify the physical development constraints imposed upon, and the development opportunities open to, the Corridor; to set forth a set of physical development objectives and supporting standards and urban design criteria for the Corridor study area; and to determine probable future land use and related requirements within the Corridor. Alternative development plans were prepared and evaluated; the best of these alternative plans were identified and recommended for adoption. Finally, plan implementation measures and devices needed to carry out the recommended plans effectively were identified, with particular emphasis on any necessary revisions to the Village's zoning and subdivision control ordinances.

## THE COMMUNITY COMPREHENSIVE PLANNING PROCESS

The recommended plans presented in this report were developed through a planning process consisting of the following six steps: 1) a comprehensive inventory of the factors affecting development and redevelopment in the Corridor, 2) a careful analysis of the inventory data, 3) the formulation of Corridor development objectives, principles, standards, and related urban design criteria, 4) the development and evaluation of alternative plans, 5) the selection of a recommended Corridor land use plan, urban design plan, and transportation plan, and 6) the recommendation of plan implementation measures.

### Inventory and Analysis

Reliable basic planning data are absolutely essential to the formulation of workable development plans. Consequently, inventory becomes the first operational step in the planning process. The crucial nature of factual information in the planning process should be evident, since no intelligent forecasts can be made or alternative courses of action evaluated without knowledge of the current state of the system being planned. The sound formulation of a land use plan, an urban design plan, and a transportation plan for the Corridor requires that factual data be developed on the existing development pattern, on the potential demand for each of the various major land use categories, on the major determinants of these demands, and on local development potentials and constraints, as well as on the underlying natural resource and public utility base and its ability 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 Corridor, as well as opportunities and potentials for good development. The inventory data are also crucial to the forecasting of future community developmental needs, formulating alternative plans, and evaluating such alternative plans.

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

An objective may be 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 in the preparation of alternative plans and provide an important basis for the evaluation of these alternatives and the selection of recommended plan from among the alternatives considered. The community development plans should be clearly related to the defined objectives through a set of standards and urban design criteria. Objectives may change as new information is developed, as objectives are fulfilled through plan implementation, or as objectives fail to be implemented due to changing public attitudes and values. The formulation of objectives should involve the active participation of local officials and citizens. To this end, the Village Plan Commission includes citizen members and public officials and provides active guidance

throughout the entire Corridor planning process. In addition, the Village Plan Commission established the Corridor Plan Advisory Committee, consisting of residents and business representatives of the Village, to define perceived development problems and potential solutions.

### Development and Evaluation of Alternative Plans and the Selection and Adoption of Recommended Plans

The alternative plans should be evaluated on the basis of the relative ability to attain the development objectives agreed upon, and the plans which are judged best to meet those objective and criteria should be selected for adoption. The evaluation should be made by the Village Plan Commission. Such evaluation and selection involves the application of information obtained during the inventory and analysis stages of the planning process as well as during the later plan design stages.

### Plan Implementation

Implementation of the adopted land use plan, urban design plan, and transportation plan requires the use of several planning tools of a legal nature. A zoning ordinance and accompanying zoning district map should be used to legally assure that private land use development and redevelopment occur in conformance with the adopted plan. The zoning regulations should specify not only the types of land uses permitted in various parts of the planning area but also the height and arrangement of buildings on the land, the intensity of the use of land, and needed supporting facilities which are required to carry out the intent of the development plan. Land subdivision regulations should be applied to assure that any proposed land subdivision plats and certified survey maps conform to the plans both with respect to the proposed land uses to be accommodated and with respect 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, and parks needed to serve the land use pattern recommended in the land use plan and the transportation plan is reserved for future public use. Implementation of the plan should also be furthered by the formulation of public policies which will 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.

## Chapter II

### INVENTORY AND ANALYSIS

#### INTRODUCTION

The proper formulation of a land use, urban design, and transportation plan for the Village of Hales Corners Corridor study area required the collection and collation of data on the historic land use development pattern; on the potential demand for each of the various major land use categories and on the major determinants of these demands; and on local development objectives and constraints, as well as on the underlying natural resource and public utility base and its ability to support development in the Corridor. The required inventories and analyses not only provided essential data describing existing conditions but also provided a basis for identifying existing and potential problems in the Corridor, as well as opportunities and the potential for desirable land use and transportation facility development.

#### EARLY COMMUNITY HISTORY

The Potawatomi Indians were the earliest inhabitants of the Hales Corners area and in 1833 they signed a treaty with the U. S. Government relinquishing their rights to territories of Wisconsin. The U. S. Public Land Survey, essential to the development of the area through private enterprise, was completed in the area in 1836. This permitted the transfer of the ownership of land from the government to private citizens. Soon after the Wisconsin Territory was opened for settlement, two brothers, Seneca and William Hale, and their father, Ebenezer, came from New York State to settle in the Hales Corners area. Ebenezer was the eldest son of Francis Hale, a brother of Nathan Hale of Revolutionary War fame. Ebenezer's eldest son, Seneca, came to Milwaukee County in 1836, William arrived in 1837, followed by Ebenezer himself the next year. All three obtained patents to three quarter sections of land that met at the junction of what is now S. 108th Street (STH 100 and USH 45) and W. Janesville Road (STH 24). The fourth quarter section abutting their land at the "Corner" was patented by Dr. Chester F. Ellsworth. The village was officially named Hale's Corners, with an apostrophe, in 1854. When the first U. S. Post Office was established

there, President James Polk appointed William Hale as Postmaster. Even though three Hales settled here, the village name would indicate a single Hale as its source until at least 1898. Although the Village of Hales Corners developed as a crossroads community with, initially, an inn and a sawmill, it was the neighboring rural area, settled principally by farmers, which sustained the Village. Even though the Village was connected in 1903 by an electric interurban railway line (the T. M. E. R. & L. Co.) to Milwaukee, the Village and environs remained largely a rural, agricultural area until the 1950s, when urban development began to take place in the area at a relatively rapid rate because of the expansion of the Milwaukee urbanized area. Hale's Corners was incorporated as the Village of Hales Corners in 1952. The electric interurban railway line was abandoned in 1951, and the right-of-way along S. 108th Street continues to be used as an electric power transmission right-of-way. The historic pattern of urban growth in the Village of Hales Corners from 1880 to 1985 is shown on Map 2 in Chapter I.

#### POPULATION AND EMPLOYMENT BASE

Information on the size, characteristics, and distribution of the resident population and of employment in a planning area and on anticipated changes in these socioeconomic factors over time is essential to the preparation of sound development plans. In the final analysis, development plans should benefit the resident population of the community by maintaining and enhancing living and working conditions. The size and characteristics of the existing and probable future resident population and of employment in the planning area has a direct influence on land use needs. The primary purpose of the development plan is to meet those needs in an efficient, economical, and environmentally sound manner.

##### Population and Employment Forecasts

The required population and employment forecasts were based on consideration of a range of alternative future population and employment levels postulated for the seven-county Southeastern Wisconsin Region by the Regional Planning

Commission. Three alternative future scenarios were postulated by the Commission for the purpose of preparing a new regional land use plan for the design year 2010, with two intended to identify reasonable extremes and one intended to identify a most probable future between the extremes. Population and employment changes attendant to each future were projected. A "most reasonably optimistic" future scenario of population and employment change was postulated by combining those socioeconomic factors that were internally consistent and would create highly favorable conditions for economic and population growth within the Region. Similarly, a "most reasonably pessimistic" future scenario was postulated by combining those socioeconomic factors that would tend to create unfavorable conditions for population and employment growth within the Region.<sup>1</sup>

**Optimistic Future Scenario:** The optimistic future scenario envisions the Region as a whole experiencing only a slight decline in household 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 United States over the next two decades and that the pattern of out-migration of population and of decline in economic activities and employment experienced in the recent past will subside. The greater attractiveness of the Region is due to such factors and the availability of an ample high-quality water supply; availability of certain raw materials, particularly agriculture-related materials; the presence of a well developed and maintained transportation network; low-cost public utilities, including sanitary sewerage, public water supply, and electric power; a high-quality environment; ample recreational opportunities; a high-quality labor force; an improved

tax structure; and receptive community attitudes toward the needs of business and industry.

**Intermediate Future Scenario:** The intermediate future scenario assumes that even though some out-migration of population and jobs will continue, the relative attractiveness of the Region will result in a stabilization of population and employment. Aggressive marketing of selectively targeted industries will serve to stimulate some new job growth within planning areas. 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 while retirement-age population would be expected to show a significant increase under this alternative future for the Region.

**Pessimistic Future Scenario:** The pessimistic 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 birthrates lower than replacement level, a continued decline in household size, and an increase in female participation in the labor force.

**Degree of Centrality:** An additional variable was added to the analysis for each scenario described above. That variable dealt with the degree of centrality of incremental urban land use development as measured by the relative proximity of new urban land uses to the major urban centers in the Region. Two alternative land use and attendant employment and population distributions, referred to as centralized and decentralized distributions, were developed.

The centralized distribution concentrates development in and around the older urban centers of the Region 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 and sanitary sewers. The decentralized distribution accommodates proportionately less people in and around the older urban centers of the Region and adjacent suburbs, and proportionately more in the outlying areas. The decentralized distribution assumes

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<sup>1</sup>For a description of the methodology used to develop these projections, see SEWRPC Technical Report No. 25, *Alternative Futures for Southeastern Wisconsin*; Technical Report No. 11, 2nd Edition, *The Population of Southeastern Wisconsin*; and Technical Report No. 10, 2nd Edition, *The Economy of Southeastern Wisconsin*.

Table 1

**ALTERNATIVE POPULATION AND EMPLOYMENT FORECASTS FOR SOUTHEASTERN  
WISCONSIN, MILWAUKEE COUNTY, AND THE VILLAGE OF HALES CORNERS: 1985 AND 2010**

Demographics	1985 Estimates	Alternative Future Scenario: 2010	
		Intermediate	Optimistic
<b>Region<sup>a</sup></b>			
Population .....	1,742,700	1,872,200	2,316,100
Jobs .....	871,900	1,051,300	1,251,600
<b>Milwaukee County</b>			
Population .....	939,570	934,000	920,900
Jobs .....	527,300	578,700	622,300
<b>Village of Hales Corners</b>			
Population .....	6,840	6,790	6,830
Jobs .....	2,980	3,150	3,250

<sup>a</sup>Region includes Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha Counties.

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

that a significant proportion of the population will prefer to reside in a suburban or rural setting with relatively large lots and few, if any, urban services.

**Intermediate-Centralized and Optimistic-Decentralized Forecasts:** Two of the possible alternative future scenarios postulated by the Commission in its regional planning efforts were considered for the Village of Hales Corners: an intermediate-centralized scenario and an optimistic-decentralized scenario. These two particular alternative future scenarios were believed to represent the range of possible future conditions which may be reasonably expected to occur in the Village of Hales Corners over the plan design period, in this case, to the year 2010. The forecast population and employment levels envisioned under the two scenarios described above for the Southeastern Wisconsin Region, Milwaukee County, and the Village of Hales Corners are set forth in Table 1.

The intermediate-centralized scenario envisions that the resident population of the Region will increase from about 1,742,700 persons in 1985 to about 1,872,200 persons in 2010, an increase of about 129,500 persons, or about 7 percent over

the 1985 level; and that the number of jobs will increase from about 871,900 jobs in 1985 to about 1,051,300 jobs by 2010, an increase of about 179,400 jobs, or about 21 percent. In Milwaukee County, the intermediate-centralized scenario envisions that the resident population will decrease from about 939,570 persons in 1985 to about 934,000 persons in 2010, a decrease of about 5,570 persons, or about 1 percent, and that the number of jobs will increase from about 527,000 jobs in 1985 to about 578,000 jobs by 2010, an increase of about 51,400, or about 10 percent. For the Village of Hales Corners, this scenario envisions that the resident population will remain essentially stable, decreasing slightly from about 6,840 persons in 1985 to about 6,790 persons in 2010, a decrease of slightly less than 1 percent over the 25-year period. The number of jobs would increase from about 2,980 jobs in 1985 to about 3,150 jobs in 2010, an increase of about 170 jobs, or about 6 percent.

The optimistic-decentralized scenario envisions that the resident population of the Region will increase from about 1,742,700 persons in 1985 to about 2,316,100 persons in the year 2010, an increase of about 573,400 persons, or about

Table 2

**COMPARISON OF HISTORIC POPULATION LEVELS FOR THE STATE OF WISCONSIN, THE SOUTHEASTERN WISCONSIN REGION, MILWAUKEE COUNTY, AND THE VILLAGE OF HALES CORNERS: 1850-1989**

Year	Wisconsin		Region		Milwaukee County		Village of Hales Corners <sup>a</sup>	
	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	--	31,077	--	--	--
1860	775,881	154.1	190,409	67.9	62,518	101.2	--	--
1870	1,054,670	35.9	223,546	17.4	89,930	43.8	--	--
1880	1,315,497	24.4	277,119	24.0	138,537	54.0	--	--
1890	1,693,330	28.7	386,774	39.6	236,101	70.4	--	--
1900	2,069,042	22.2	501,808	29.7	330,017	39.8	--	--
1910	2,333,860	12.8	631,161	25.8	433,187	31.3	--	--
1920	2,632,067	12.8	783,681	24.2	539,449	24.5	--	--
1930	2,939,006	11.7	1,006,118	28.4	725,263	34.4	--	--
1940	3,137,587	6.8	1,067,699	6.1	766,885	5.7	--	--
1950	3,434,575	9.5	1,240,618	16.2	871,047	13.6	--	--
1960	3,952,777	15.1	1,573,614	26.8	1,036,047	18.9	5,549	--
1970	4,417,821	11.8	1,756,083	11.6	1,054,249	1.8	7,771	40.0
1980	4,705,642	6.5	1,764,919	0.5	964,988	-8.5	7,110	-8.5
1985 <sup>b</sup>	4,779,021	1.9	1,742,742	-1.3	939,570	-2.6	6,842	-3.8
1989 <sup>b</sup>	4,863,154	1.8	1,767,757	1.4	932,959	-0.7	7,450	8.9

<sup>a</sup> The Village of Hales Corners was incorporated in 1952.

<sup>b</sup> The 1985 and 1989 population data are estimates.

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

33 percent, and that the number of jobs will increase from about 871,900 in 1985 to about 1,251,600 by the year 2010, an increase of about 379,700 jobs, or about 44 percent. In Milwaukee County, the optimistic-decentralized scenario envisions that the resident population will decrease from about 939,570 persons in 1985 to about 920,900 persons by the year 2010, a decrease of about 18,670 persons, or about 2 percent; and that the jobs will increase from about 527,300 jobs in 1985 to about 622,300 jobs by the year 2010, an increase of about 95,000 jobs or about 18 percent. For the Village of Hales Corners, the optimistic-decentralized scenario also envisions that the resident population will remain essentially stable, decreasing slightly from about 6,840 persons in 1985 to about 6,830 persons in 2010, a decrease of less than 1 percent, and that the number of jobs will increase from about 2,980 jobs in 1985 to about 3,250 jobs in the year 2010, an increase of about 270 jobs, or about 9 percent.

**Selected Forecast:** Of the two alternative scenarios, the intermediate future, within the framework of a centralized urban development pattern, was selected as the most probable future forecast for the Village of Hales Corners. In order to set the intermediate future into perspective, the historic population levels of the State, Region, Milwaukee County, and the Village of Hales Corners are presented in Table 2. This table indicates that the Village has experienced increases and decreases in resident population since 1960. Figure 1 graphically shows the historic and forecast future resident population levels for the Village of Hales Corners based on the two alternative future scenarios considered.

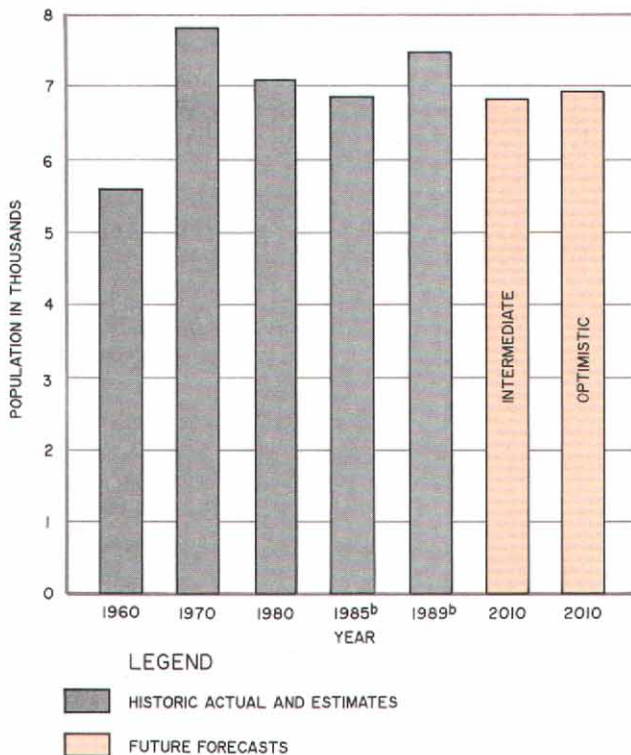
#### Historic and Alternative Future Age Distribution

The historic and probable future resident population level for the Southeastern Wisconsin Region, Milwaukee County, and the Village of Hales Corners by age group for both the



Figure 1

**HISTORIC AND FORECAST POPULATION LEVELS  
FOR THE VILLAGE OF HALES CORNERS: 1960-2010<sup>a</sup>**



<sup>a</sup> THE VILLAGE OF HALES CORNERS WAS INCORPORATED IN 1952.  
<sup>b</sup> THE 1985 AND 1989 POPULATION DATA ARE ESTIMATES.

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

intermediate-centralized and the optimistic-decentralized scenarios are set forth in Table 3. The table indicates distinctly different population growth rates and changes for the various age groups under the two alternative scenarios.

The anticipated changes in the age composition of the resident population of the Village of Hales Corners, set forth in Table 3, have important implications for land use. The intermediate forecast indicates that the school-age population, the five to 14 and the 15 to 19 age groups, may be expected to decrease from about 1,804 persons to about 1,261 persons, a decrease of about 543 persons, or about 30 percent, to the year 2010. Table 3 indicates that the 20 to 64 age group may also be expected to decrease from about 4,320 persons to about 3,890 persons, a decrease

of about 430 persons, or about 10 percent. These decreases may be expected because of replacement level birth rates and a decrease in household size, a general aging of the population, and limited availability of land for future residential development, since most of the Village is already developed. Finally, the figures indicate a dramatic increase in population that is 65 years of age and older from about 638 persons to about 1,316 persons, an increase of about 678 persons, or about 106 percent. This general aging of the population may be expected to affect the demand for elderly housing units and special transportation and health care in the Hales Corners area.

Historic and Probable Future  
Household Size and Family Income

Table 4 compares historic and probable future household sizes in the Southeastern Wisconsin Region, Milwaukee County, and the Village of Hales Corners under the intermediate and optimistic population forecasts for the year 2010. As already noted, the intermediate population scenario was selected as the probable future forecast. Table 4 indicates that in 1985 the average household size in the Village was 2.73 persons, compared to 2.48 in the County and 2.64 in the Region. The table also indicates that the average household size under the intermediate forecast may be expected to decline for all of the areas considered. This is in keeping with the trends exhibited from 1960 to 1985. These changes in average household size have important implications for housing and residential land use planning, since the average household size is used to convert a population forecast into the number of dwelling units needed over a planning period.

Table 5 indicates family income in 1980, the latest year for which definitive data are available, for Southeastern Wisconsin Region, Milwaukee County, and the Village of Hales Corners by income ranges, together with the median and mean income levels for each of the geographic areas listed, expressed in terms of both 1980 and 1989 dollars. In 1980, the median family income, expressed in 1989 dollars, was \$36,335 in the Region, \$33,930 in Milwaukee County, and \$44,533 in the Village of Hales Corners. The mean, or average, family income in 1980, expressed in 1989 dollars, was \$40,473 for the Region, \$37,633 for Milwaukee County, and \$49,853 for the Village of Hales Corners. Both the median and the mean family income in the

Table 3

**HISTORIC AND ALTERNATIVE FORECAST RANGE FOR COMPOSITION OF THE  
RESIDENT POPULATION BY AGE GROUP IN THE SOUTHEASTERN WISCONSIN REGION,  
MILWAUKEE COUNTY, AND THE VILLAGE OF HALES CORNERS: 1980 AND 2010**

Age Group	Southeastern Wisconsin Region: 1980		Regional Alternative Forecast Range: 2010 <sup>a</sup>	
	Number	Percent	Number	Percent
Under 5 .....	128,085	7.3	110,830-150,540	5.9-6.5
5 to 14 .....	274,086	15.5	223,140-297,570	11.9-12.8
15 to 19 .....	168,897	9.6	125,050-161,650	6.7-7.0
20 to 64 .....	998,557	56.4	1,148,230-1,382,780	61.3-59.7
65 and Older .....	195,294	11.2	264,830-323,540	14.2-14.0
All Ages	1,764,919	100.0	1,872,080-2,316,090	100.0-100.0

Age Group	Milwaukee County: 1980		Milwaukee County Alternative Forecast Range: 2010 <sup>a</sup>	
	Number	Percent	Number	Percent
Under 5 .....	69,030	7.2	54,326-56,138	5.8-6.1
5 to 14 .....	136,150	14.1	107,929-109,592	11.6-11.9
15 to 19 .....	86,669	9.0	62,435-62,603	6.7-6.8
20 to 64 .....	551,592	57.1	581,841-568,903	62.3-61.8
65 and Older .....	121,547	12.6	127,476-123,657	13.6-13.4
All Ages	964,988	100.0	934,007-920,893	100.0-100.0

Age Group	Village of Hales Corners: 1980		Village of Hales Corners Alternative Forecast Range: 2010 <sup>a</sup>	
	Number	Percent	Number	Percent
Under 5 .....	350	4.9	325-343	4.8-5.0
5 to 14 .....	1,041	14.6	782-813	11.5-11.9
15 to 19 .....	763	10.7	479-491	7.1-7.2
20 to 64 .....	4,318	60.8	3,889-3,871	57.2-56.7
65 and Older .....	638	9.0	1,316-1,310	19.4-19.2
All Ages	7,110	100.0	6,791-6,828	100.0-100.0

<sup>a</sup>The first number shown in the range represents forecasts based upon the intermediate future scenario-centralized development pattern; and the second number shown in the range represents forecasts based upon the optimistic future scenario-decentralized development pattern.

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

Village of Hales Corners in 1980 were higher than those in both the Region and Milwaukee County.

#### Occupations and Employment Trends

Table 6 indicates that in 1980, the latest year for which definitive data are available, 826,456

persons, or about 47 percent of the resident population of the Southeastern Wisconsin Region, were in the employed labor force. Similarly, in Milwaukee County, 450,851, or about 47 percent of the resident County population, were in the employed labor force. In the Village of Hales Corners, 3,700 persons, or about



Table 4

**COMPARISON OF HISTORIC AND PROBABLE FUTURE POPULATION PER  
OCCUPIED HOUSING UNIT IN THE SOUTHEASTERN WISCONSIN REGION,  
MILWAUKEE COUNTY, AND THE VILLAGE OF HALES CORNERS: 1960-2010**

Year	Southeastern Wisconsin Region	Milwaukee County	Village of Hales Corners
1960	3.30	3.21	3.76
1970	3.20	3.04	3.57
1980	2.75	2.59	2.85
1985 <sup>a</sup>	2.64	2.48	2.73
2010 (intermediate)	2.40	2.25	2.43
2010 (optimistic)	2.67	2.46	2.67

<sup>a</sup> The 1985 data are estimates.

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

Table 5

**FAMILY INCOME IN SOUTHEASTERN WISCONSIN,  
MILWAUKEE COUNTY, AND THE VILLAGE OF HALES CORNERS: 1980**

Actual Income Range (1980 dollars)	Converted Income Range (1989 dollars) <sup>a</sup>	Southeastern Wisconsin		Milwaukee County		Village of Hales Corners	
		Number of Families	Percent of Total	Number of Families	Percent of Total	Number of Families	Percent of Total
Less than \$2,500	Less than \$3,865	7,873	1.7	5,289	2.1	22	1.1
\$2,500 to \$4,999	\$3,866 to \$7,725	12,672	2.8	8,838	3.6	26	1.3
\$5,000 to \$7,499	\$7,726 to \$11,590	20,161	4.4	13,313	5.4	19	1.0
\$7,500 to \$9,999	\$11,591 to \$15,450	22,172	4.8	13,913	5.6	37	1.9
\$10,000 to \$12,499	\$15,451 to \$19,315	24,975	5.5	15,142	6.1	92	4.7
\$12,500 to \$14,999	\$19,316 to \$23,175	25,653	5.6	15,581	6.3	75	3.8
\$15,000 to \$17,499	\$23,176 to \$27,040	30,169	6.6	17,417	7.0	111	5.6
\$17,500 to \$19,999	\$27,041 to \$30,905	32,476	7.1	17,986	7.3	75	3.8
\$20,000 to \$22,499	\$30,906 to \$34,765	38,469	8.4	20,559	8.3	166	8.4
\$22,500 to \$24,999	\$34,766 to \$38,630	34,876	7.6	18,454	7.5	170	8.6
\$25,000 to \$27,499	\$38,631 to \$42,490	36,159	7.9	18,220	7.4	116	5.9
\$27,500 to \$29,999	\$42,491 to \$46,355	28,904	6.3	14,749	6.0	142	7.2
\$30,000 to \$34,999	\$46,356 to \$54,080	49,233	10.8	24,330	9.8	285	14.5
\$35,000 to \$39,999	\$54,081 to \$61,805	30,978	6.8	14,722	6.0	196	10.0
\$40,000 to \$49,999	\$61,806 to \$77,260	33,175	7.2	15,784	6.4	187	9.5
\$50,000 to \$74,999	\$77,261 to \$115,890	20,857	4.6	9,228	3.7	189	9.6
\$75,000 or more	\$115,891 or more	8,751	1.9	3,641	1.5	60	3.1
Total	--	457,553	100.0	247,166	100.0	1,968	100.0
Median Income (1980 dollars)	--	\$23,515	--	\$21,958	--	\$28,820	--
Median Income (1989 dollars)	--	\$36,335	--	\$33,930	--	\$44,533	--
Mean Income (1980 dollars)	--	\$26,193	--	\$24,355	--	\$32,263	--
Mean Income (1989 dollars)	--	\$40,473	--	\$37,633	--	\$49,853	--

<sup>a</sup> A multiplier of 1.5452 from the Consumer Price Index was used to convert 1980 dollars to 1989 dollars.

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

Table 6

**EMPLOYED PERSONS 16 YEARS OF AGE AND OLDER BY OCCUPATION IN SOUTHEASTERN  
WISCONSIN, MILWAUKEE COUNTY, AND THE VILLAGE OF HALES CORNERS: 1980**

Occupation	Southeastern Wisconsin		Milwaukee County		Village of Hales Corners	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Managerial and Professional Specialty						
Executive, Administrative, Managerial .....	81,635	9.9	41,257	9.2	561	15.2
Professional Specialty .....	96,863	11.7	53,297	11.8	640	17.3
Technical, Sales, Administrative Support						
Technicians and Related Support .....	25,271	3.1	14,507	3.2	122	3.3
Sales .....	81,057	9.8	42,457	9.4	604	16.3
Administrative Support, Including Clerical .....	143,121	17.3	86,118	19.1	741	20.0
Service						
Private Household .....	2,486	0.3	1,377	0.3	0	--
Protective Service .....	11,721	1.4	7,852	1.7	24	0.7
Service, Except Protective and Household .....	95,816	11.6	55,344	12.3	297	8.0
Farming, Forestry, and Fishing .....	9,065	1.1	1,750	0.4	0	--
Precision Production, Craft, Repair .....	100,953	12.2	49,678	11.0	374	10.1
Operators, Fabricators, and Laborers						
Machine Operators, Assemblers, Inspectors .....	109,787	13.3	58,973	13.1	149	4.0
Transportation and Material Moving .....	33,843	4.1	18,733	4.2	82	2.2
Handlers, Equipment Cleaners, Helpers, Laborers .....	34,838	4.2	19,508	4.3	106	2.9
Total	826,456	100.0	450,851	100.0	3,700	100.0

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

52 percent of the resident population, were in the employed labor force. A higher percentage of the residents of the Village were in the employed labor force than of the residents of the Region and of Milwaukee County.

Table 6 also provides information on the employed population 16 years of age and older by occupation for the Region, for Milwaukee County, and for the Village in 1980. According to Table 6, white-collar occupations, including managerial and professional specialty and technical, sales, and administrative support workers, represented about 52 percent of the employed persons in the Region, about 53 percent of the employed persons in Milwaukee County, and about 72 percent of the employed population of the Village. Blue-collar occupations, including service, farming, forestry and fishing; precision production, craft, and repair; and operators, fabricators, and laborers, represented about 48 percent of the employed persons of the Region, about 47 percent of the employed persons in the County, and about 28 percent of

the employed population of the Village of Hales Corners. This table indicates that, in 1980, the Village employed resident population contained a higher percentage of white-collar workers and a lower percentage of blue-collar workers compared to the employed resident population of white- or blue-collar workers in both the Region and Milwaukee County.

Table 7 shows the place of employment of workers 16 years and older living in Milwaukee County and in the Village of Hales Corners in 1980, the latest year for which definitive data are available. Table 7 indicates that, for the Village of Hales Corners, 692 workers, or about 20 percent of the employed resident population, worked in the Village of Hales Corners; 2,302 workers, or about 66 percent of the employed resident population, worked in Milwaukee County, but outside the Village; 364 workers, or about 10 percent of the employed resident population, worked outside Milwaukee County. A total of 131 workers, or about 4 percent of those living in the Village of Hales Corners, did not

Table 7

**PLACE OF WORK OF WORKERS 16 YEARS OF AGE AND OLDER LIVING  
IN MILWAUKEE COUNTY AND THE VILLAGE OF HALES CORNERS: 1980**

Place of Work	Milwaukee County		Village of Hales Corners	
	Number of Workers	Percent of Total	Number of Workers	Percent of Total
Worked in County of Residence				
Village of Hales Corners . . . . .	.. <sup>a</sup>	.. <sup>a</sup>	692	19.8
City of Milwaukee . . . . .	253,331	58.0	1,352	38.8
Remainder of Milwaukee County . . . . .	118,202	27.0	950	27.2
Subtotal	371,533	85.0	2,994	85.8
Worked outside County of Residence . . . . .	32,783	7.5	364	10.4
Not Reported . . . . .	33,036	7.5	131	3.8
Total	437,352	100.0	3,489	100.0

<sup>a</sup>Data are not available.

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

Table 8

**ESTIMATED AND FORECAST EMPLOYMENT BY TYPE IN THE VILLAGE OF HALES CORNERS: 1985-2010**

Year	Retail Trade	Service	Industrial	Institutional, Governmental, and Educational	Transportation, Communication, and Utilities	Agricultural	Total
1985							
Estimated . . . . .	1,090	1,340	210	220	120	--	2,980
2010							
Forecast							
Intermediate . . . . .	1,160	1,400	210	240	140	--	3,150
Optimistic . . . . .	1,210	1,430	210	240	160	--	3,250

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

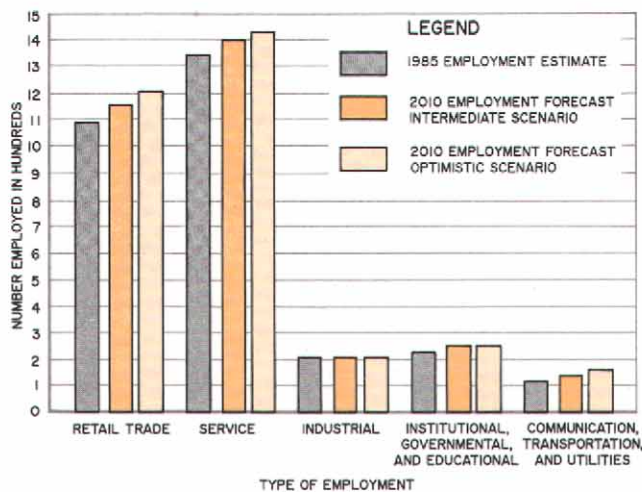
report their place of work. For Milwaukee County, 371,533 workers, or about 85 percent of the employed resident population of the County, worked in Milwaukee County, while 32,783 workers, or about 7.5 percent, worked outside Milwaukee County. A total of 33,036 workers, or about 7.5 percent of those living in Milwaukee County, did not report their place of work. The data indicates that most, approximately 85 percent, of the workers 16 years and older living in Milwaukee County or the Village also worked in their county of residence.

#### Employment Forecasts

Table 8 sets forth future employment levels for the Village of Hales Corners to the year 2010 under the intermediate and optimistic future scenarios for the six major employment categories: retail trade; service; industrial; institutional, governmental, and educational; transportation, communication, and utilities; and agricultural. Each of these employment categories may be related to specific land use requirements, and are, therefore, useful in the allocation of land to various land use categories

Figure 2

### ESTIMATED AND FORECAST EMPLOYMENT BY TYPE IN THE VILLAGE OF HALES CORNERS: 1985 AND 2010



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

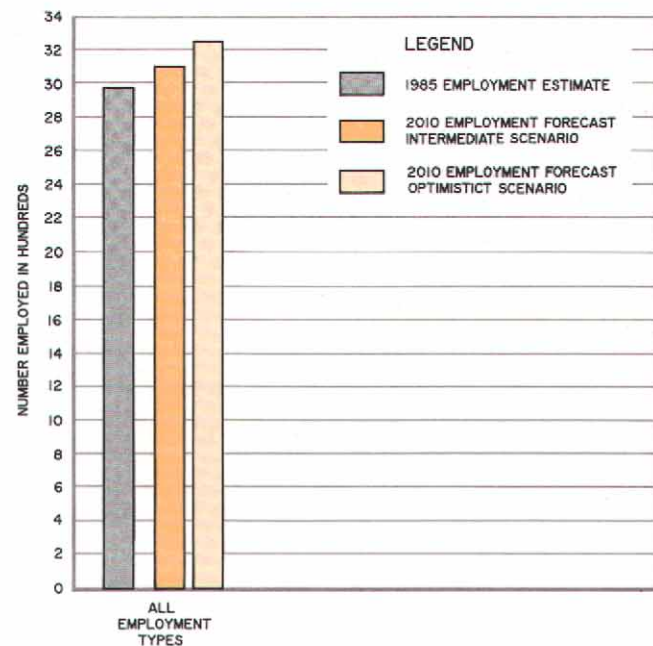
such as commercial, industrial, and governmental related uses. Figures 2 and 3, respectively, show the future employment levels for the Village of Hales Corners to the year 2010 under the intermediate and optimistic future scenarios for each of the six major employment categories and the total forecast employment levels for the Village based on these two future scenarios. Employment in the Village of Hales Corners may be expected to increase from about 2,980 jobs in 1985 to about 3,150 jobs, or about 6 percent, by the year 2010 under the intermediate-growth scenario, and about 3,250 jobs, or about 9 percent, by the year 2010 under the optimistic scenario. The distribution of employment under the intermediate forecast is as follows: about 37 percent in retail trade employment; about 44 percent in service employment; about 7 percent in industrial employment; about 8 percent in institutional, governmental, and educational employment; and the remaining 4 percent in the transportation, communications, and utilities employment category.

### CITIZEN INPUT

In order to be better able to consider the general concerns and desires of the Village of Hales Corners residents and businesses towards devel-

Figure 3

### ESTIMATED AND FORECAST EMPLOYMENT LEVELS FOR THE VILLAGE OF HALES CORNERS: 1985 AND 2010



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

opment related issues in the Corridor study area, the Village requested the University of Wisconsin-Milwaukee Management Research Center to conduct a survey of public attitudes. The Village also created the Corridor Plan Advisory Committee, consisting of residents and business representatives, to participate actively in the development of a land use plan, urban design plan, and a transportation plan for the Corridor study area.

### Management Research Center Report

The University of Wisconsin-Milwaukee Management Research Center assisted the Village in defining citizens concerns by using three survey approaches to obtain benchmark opinions from representatives of the Village leadership, to obtain an in-depth view of leading businesses, and to obtain evidence on the views held by citizens by means of focus groups. In September 1989, this study was completed and the findings presented in a report titled Results of Preliminary Research on Attitudes of Citizens of Hales Corners Pertaining to the Commercial Corridor. The three survey approaches and their results are summarized below.

**Benchmark Opinion:** Opinions gathered by survey from the administration or leadership of the Village are referred to as benchmark opinions. The UWM survey requested each respondent to identify the two most important and two least important issues pertaining to the Corridor. These perceptions of the leadership, when compared with the perceptions of the citizens through subsequent information gathering procedures, provide a basis for determining how well the leadership of the Village is aware of, and in accord with, citizen concerns.

Of the 16 responses received, the most frequently cited issue, mentioned 10 times, was traffic, especially traffic on S. 108th Street. The need for a long-term plan and improving aesthetics in the Corridor were also cited as major issues of concern. The most frequently cited issues perceived to be of minor importance were shopping opportunities, aesthetics of signs, and removal of the electrical power transmission line towers along S. 108th Street.

**Business Owner Interviews:** Six personal interviews were conducted with prominent owners and heads of businesses. These individuals were interviewed rather than integrated into focus groups, to avoid the likelihood that they might dominate a focus group and also to permit them the opportunity to express their opinions without the constraint of a group environment.

Again, the most frequently mentioned concern in the interviews was traffic, especially that on S. 108th Street. Other concerns include the lack of planned growth to avoid spot zoning; lack of a theme to create a sense of Hales Corners identity; and skepticism as to whether the Village leaders and planners would consider business and citizen input seriously.

**Focus Groups:** Three focus groups were established to provide an opportunity for citizens to share their opinions concerning the Corridor. Participants were selected on the basis of several criteria, including the proximity of their residence to the Corridor. The discussion of each focus group involved eliciting the participants' views on two subjects: development issues pertaining to the Corridor and the citizen input process.

Traffic, especially on S. 108th Street, dominated the discussion for defining development issues. The difficulty of accessing, crossing, and mak-

ing left turns on S. 108th Street were specific concerns raised by the focus groups. The only other issue of significant concern discussed was the Village's lack of a long-range plan to end spot zoning, promote aesthetic improvements, or achieve a unique Village identity. Each focus group expanded the discussion to include suggested solutions such as, but not limited to, creating service roads or a double-decked highway along S. 108th Street, limiting ingress and egress to and from S. 108th Street, developing a system of bike trails, and discouraging the development of strip shopping centers.

Citizen input to the planning process was discussed, but it did not generate the same enthusiasm or intensity as traffic issues. The participants indicated that they would like greater opportunities for providing input into the planning process, but that it was more important that they be well informed by the Village's Administration of its planning intentions. The participants indicated that they were "turned off" by traditional public hearings, and preferred to provide input or be informed about the planning process at less formal meetings, such as neighborhood meetings. Participants also indicated that mail surveys rather than telephone surveys appear to be another alternative method for soliciting information on citizens concerns. In addition, the newsletter, Village News, was cited as an effective communication tool for informing citizens, as opposed to the HUB newspaper.

#### Corridor Plan Advisory Committee

The Village Plan Commission created the Corridor Plan Advisory Committee, consisting of residents and business representatives, to help provide citizen input to be considered during the development of a land use plan, an urban design plan, and a transportation plan for the Corridor. The Committee was divided into three subcommittees: the Development, Land Use, and Zoning Subcommittee; the Aesthetics Subcommittee; and the Transportation and Pedestrian Management Subcommittee. Each subcommittee defined problems and positive characteristics of the Corridor, and established desired goals, objectives, and recommendations for addressing these problems or enhancing the positive characteristics of the Corridor study area. The Village compiled this information into a report titled Land Use, Aesthetic, and Transportation Recommendations by the Corridor Plan Advisory Committee for Selected Arterial Street Corridors



in the Village of Hales Corners, 1991. The recommendations in the Corridor Plan Advisory Committee's report were considered simultaneously during the process of creating and evaluating the land use, urban design plan, and transportation plan for the Corridor study area.

## NATURAL RESOURCE BASE

Environmental corridors are defined by the Regional Planning Commission as linear areas in the landscape which contain concentrations of high-value elements of the natural resource base. Preservation of the natural resource base-related elements, especially where these elements are concentrated in identifiable geographic areas, is essential to the maintenance of the overall environmental quality of an area, to the continued provision of certain amenities that provide a high quality of life for the resident population, and to the avoidance of excessive costs associated with the development, operation, and maintenance of urban land uses in the area.

One of the steps in the design of a land use plan for the Village of Hales Corners Corridor study area was the detailed mapping of the environmentally significant lands in the Village. The Commission inventories were reviewed with respect to the following elements of the natural resource base: lakes, streams, and associated shorelands and floodlands; wetlands; woodlands; wildlife habitat areas; areas of rugged terrain and high relief topography; wet, poorly drained and organic soils; and remnant prairies. In addition, Commission inventories were reviewed and updated as necessary with respect to such natural resource-related features as existing parks, potential park sites, sites of historic and archaeological value, areas possessing scenic vistas or viewpoints, and areas of scientific value.

Environmental corridors and other significant natural areas in the Hales Corners area were delineated by applying criteria set forth in SEWRPC Technical Record Volume 4, No. 2, Refining the Delineation of Environmental Corridors in Southeastern Wisconsin, March 1981. The primary and secondary environmental corridors, as well as the other environmentally significant lands in the Hales Corners area so delineated in 1985, are shown on Map 4.

## Primary Environmental Corridors

The largest portion of the primary environmental corridor in the Village generally lies in Whitnall Park, along Whitnall Park Creek, and contains high-value woodlands, wetlands, and wildlife habitat areas. The adopted regional land use plan recommends that the remaining primary environmental corridors be maintained in essentially natural, open uses, which may, in some cases, include limited agricultural and low-density residential uses. Preservation of these primary corridors in an essentially open, natural state 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 flood damage, poor drainage, wet basements, failing pavements and other structures, excessive infiltration of clear waters into sanitary sewers, and water pollution. As shown on Map 4, the primary environmental corridor encompassed a total area of about 3.5 acres, or about 0.5 percent, of the total Corridor study area in 1985.

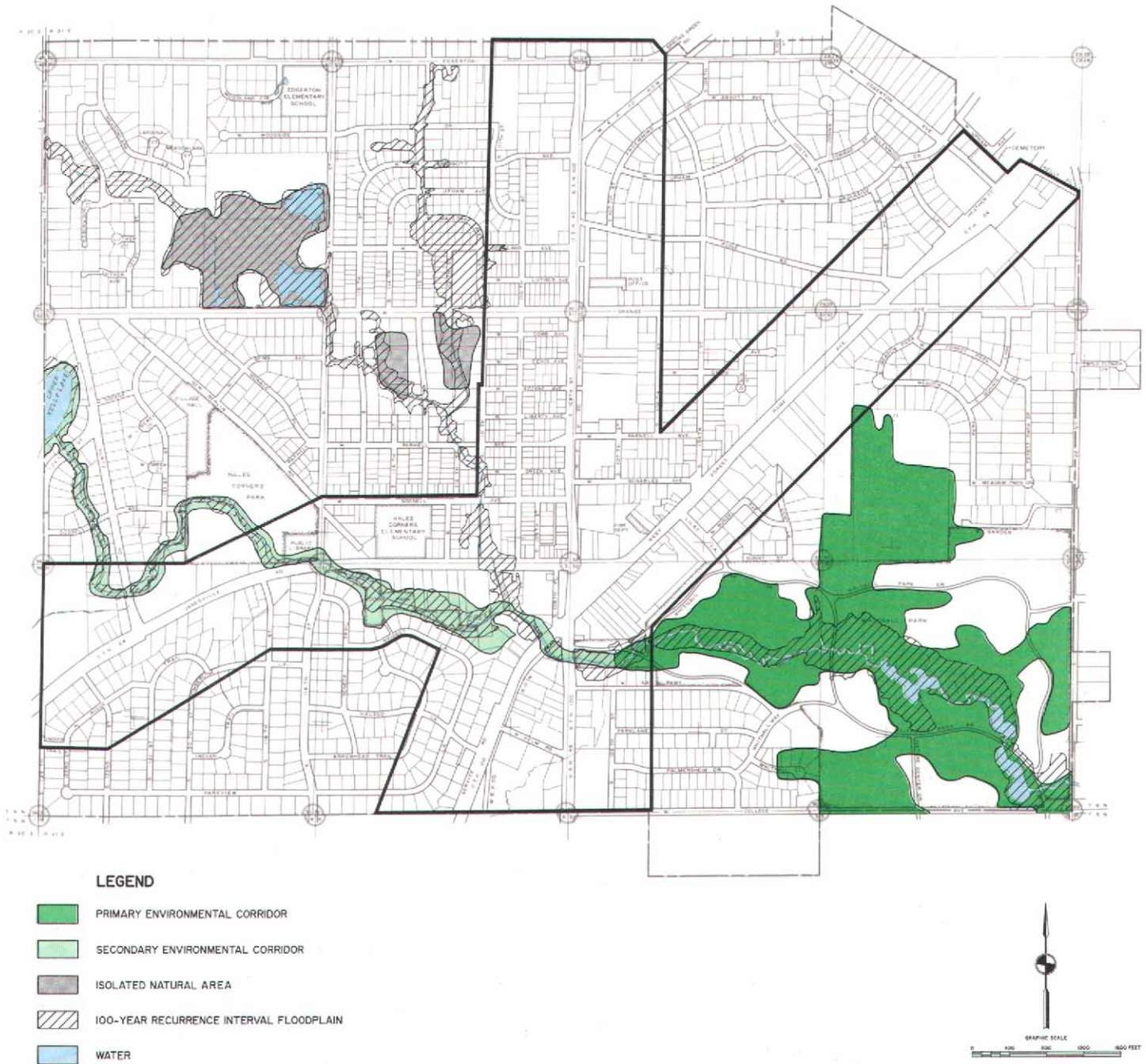
## Secondary Environmental Corridors and Isolated Natural Areas

Map 4 also identifies both secondary environmental corridors and other environmentally significant lands in the Village. Secondary environmental corridors and isolated natural areas, while not as significant as the primary environmental corridors in terms of overall resource value, should be considered for preservation as the process of urban development proceeds in the Village, particularly when the opportunity is presented to incorporate such corridors into urban stormwater detention areas, associated drainageways, and for portions of neighborhood parks.

Isolated natural areas, like the secondary environmental corridors, should also be considered for preservation since these areas generally consist of natural resource base elements that have an "inherent natural" value, such as wetlands, woodlands, wildlife habitat areas, and surface water areas, but that are separated physically from the primary and secondary environmental corridors by intensive urban or agricultural land uses. Within the Corridor study area, the secondary environmental corridor

Map 4

ENVIRONMENTALLY SIGNIFICANT LANDS IN THE VILLAGE OF HALES CORNERS: 1985



Source: SEWRPC.

encompassed a total area of about 26 acres, or about 4 percent of the total study area in 1985. No isolated natural areas existed in the Corridor study area in 1985.

### MAN-MADE FEATURES

If the Village of Hales Corners development plans are to constitute a sound and realistic

guide to the making of decisions concerning the physical development of the Corridor study area, they must be based on careful consideration of the pertinent man-made, as well as natural, features of the area. For the purposes of the Village planning program, the pertinent man-made features were identified as: the existing historic land uses, the existing historic sites, and the existing public utility systems. Each of these man-made features is described in this chapter as it affects the physical development of the Village Corridor study area. In addition, data were collected and presented on existing topographic and cadastral maps and on existing land use implementation devices.

## HISTORIC LAND USES

The Regional Planning Commission inventories existing land use within the Region approximately every five years. In addition, in 1989, a special field survey was conducted by the Commission to determine the nature and extent of existing land uses in the Village. The data gathered in these land use surveys were mapped and analyzed in order to provide a basis for both land use need and the appropriate patterns of future land use development in the Village and the Corridor study area.

Maps 5, 6, and 7 show the land uses in the Corridor study area in 1970, 1980, and 1989, respectively. In addition, Tables 9 and 10 identify the amount of land devoted to each type of land use in the Village and the Corridor study area, respectively, in 1970, 1980, and 1989. By analyzing the land use location, quantity, and changes over a period of time from these data, the potential demand and location for certain types of land uses could be determined on the basis of these historic land use trends.

In 1989, the incorporated Village of Hales Corners occupied approximately 2,048 acres, or about three square miles, and the Corridor study area occupied approximately 722 acres, or about one square mile, of the total area of the Village. In 1989, urban land uses occupied about 1,735 acres, or about 85 percent, of the total area of the Village. Natural and other land uses, which include water, wetlands, woodlands, agricultural lands, and other open lands, occupied about 313 acres, or about 15 percent, of the total Village area. In 1989, urban land uses occupied about 656 acres, or about 91 percent, of the Corridor

study area, while natural and other land uses occupied about 66 acres, or about 9 percent, of the study area.

### Residential Land Use

Of all the elements of a community development plan, that portion of the plan which normally holds the interest of the largest number of residents is residential land use. Since the residential land use element of the development plan seeks primarily to provide a safe, attractive, and comfortable setting for residential development, it is very important that this element be given very careful and thoughtful consideration. The nature and extent of residential land uses is a major determinant of the level of community facilities and services needed to serve local residents. During the time period from 1970 to 1989, the Village of Hales Corners experienced an increase in residential land use of about 14 percent, while the Corridor study area experienced an increase of only 4 percent over the 20-year period. Most of the land in the Corridor was developed while undeveloped lands existed outside the Corridor, yet within the Village.

In 1989, residential land use accounted for about 1,102 acres, or 54 percent of the total land uses in the Village. Within the Corridor study area in 1989, residential land use accounted for about 345 acres, or about 48 percent of the total study area. Single-family residential land use are found throughout the Village, and, in some areas, behind properties abutting these major arterial streets: S. 108th Street (STH 100 and USH 45), W. Janesville Road (STH 24), and W. Forest Home Avenue (STH 24 and CTH 00). In 1989, the majority of the two-family residential land uses in the Village were located within the Corridor, but not along the major arterial streets. Most of the multi-family residential land uses in the Village, about 83 percent, were located within the Corridor along the major arterial streets in 1989. Historically, the Village has experienced a significant increase in the amount of two-family and multi-family residential development between 1970 and 1989.

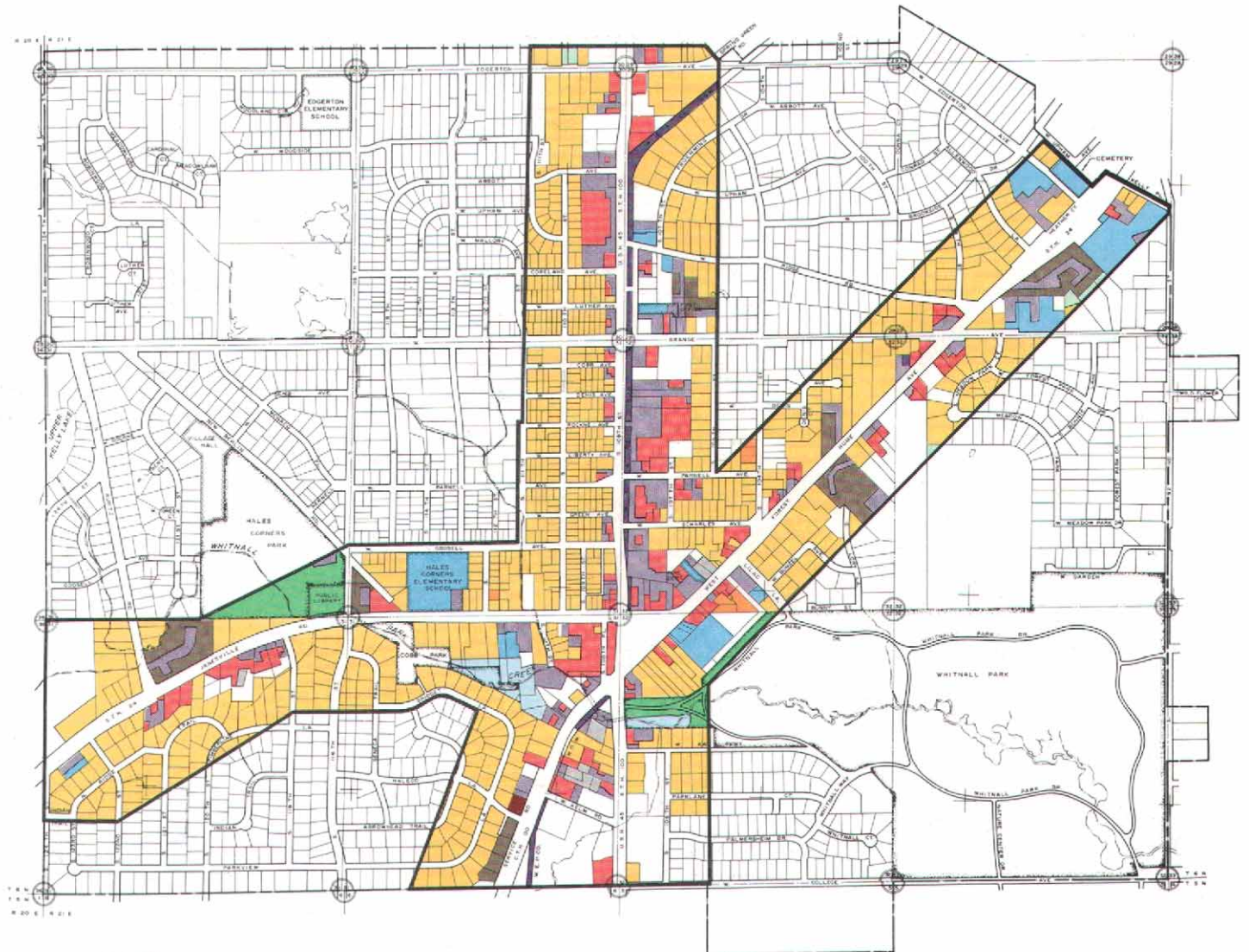
### Commercial Land Use

Table 9 indicates that from 1970 to 1989 the Village experienced a 43 percent increase in commercial land uses. In 1989, commercial land uses occupied about 104 acres, or 5 percent of the total land uses in the Village. Within the Corridor, commercial land uses occupied about



# Map 5

## EXISTING LAND USE IN THE VILLAGE OF HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA: 1970



### LEGEND

- SINGLE-FAMILY RESIDENTIAL
- TWO-FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- COMMUNICATIONS AND UTILITIES
- OFF-STREET PARKING
- GOVERNMENTAL AND INSTITUTIONAL
- PARKS AND RECREATIONAL
- WETLANDS
- WOODLANDS
- AGRICULTURAL AND OTHER OPEN LANDS

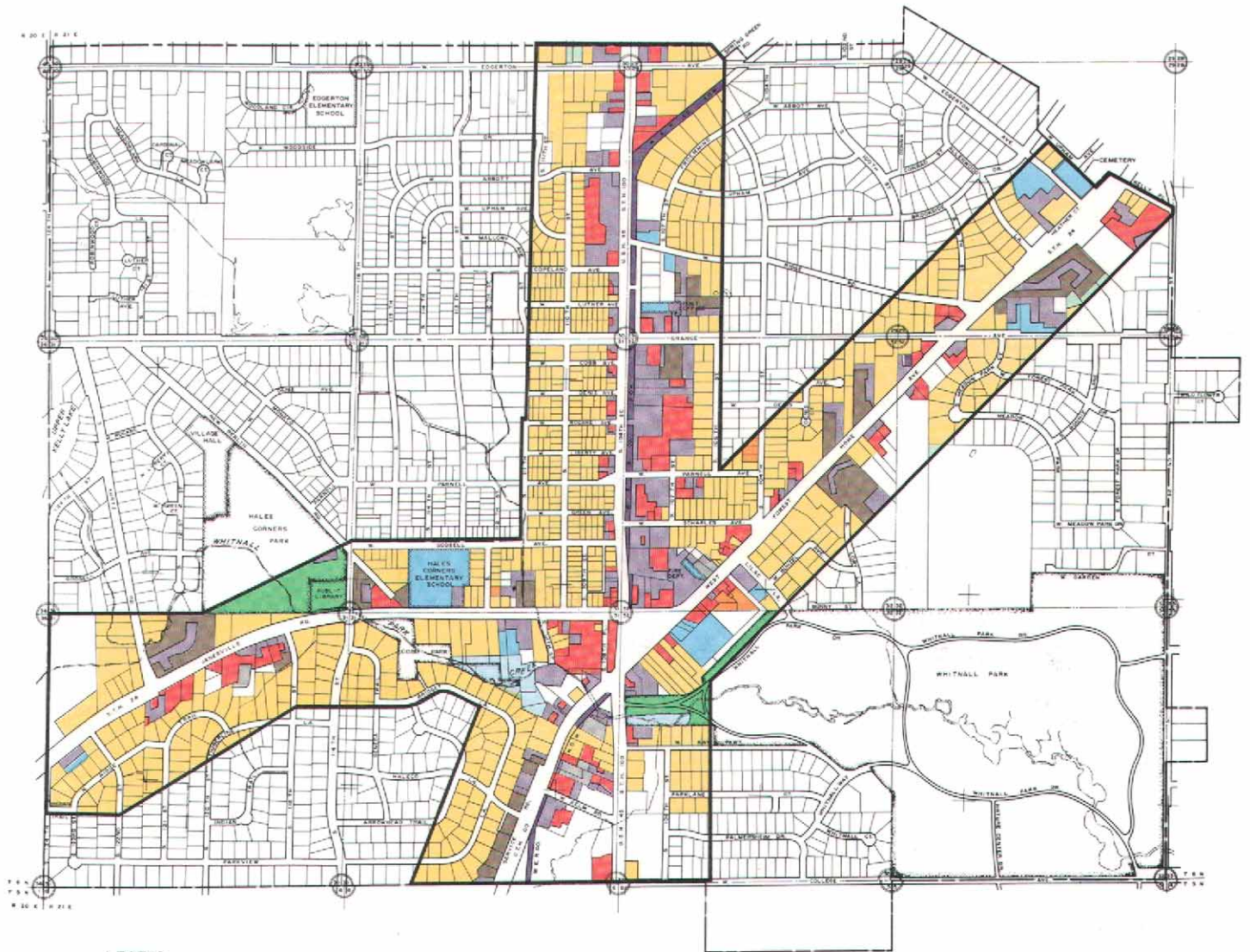
Source: SEWRPC.





Map 6

EXISTING LAND USE IN THE VILLAGE OF HALES CORNERS  
ARTERIAL STREET CORRIDOR STUDY AREA: 1980



LEGEND

- SINGLE-FAMILY RESIDENTIAL
- TWO-FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- COMMUNICATIONS AND UTILITIES
- OFF-STREET PARKING
- GOVERNMENTAL AND INSTITUTIONAL
- PARKS AND RECREATIONAL
- WETLANDS
- WOODLANDS
- AGRICULTURAL AND OTHER OPEN LANDS

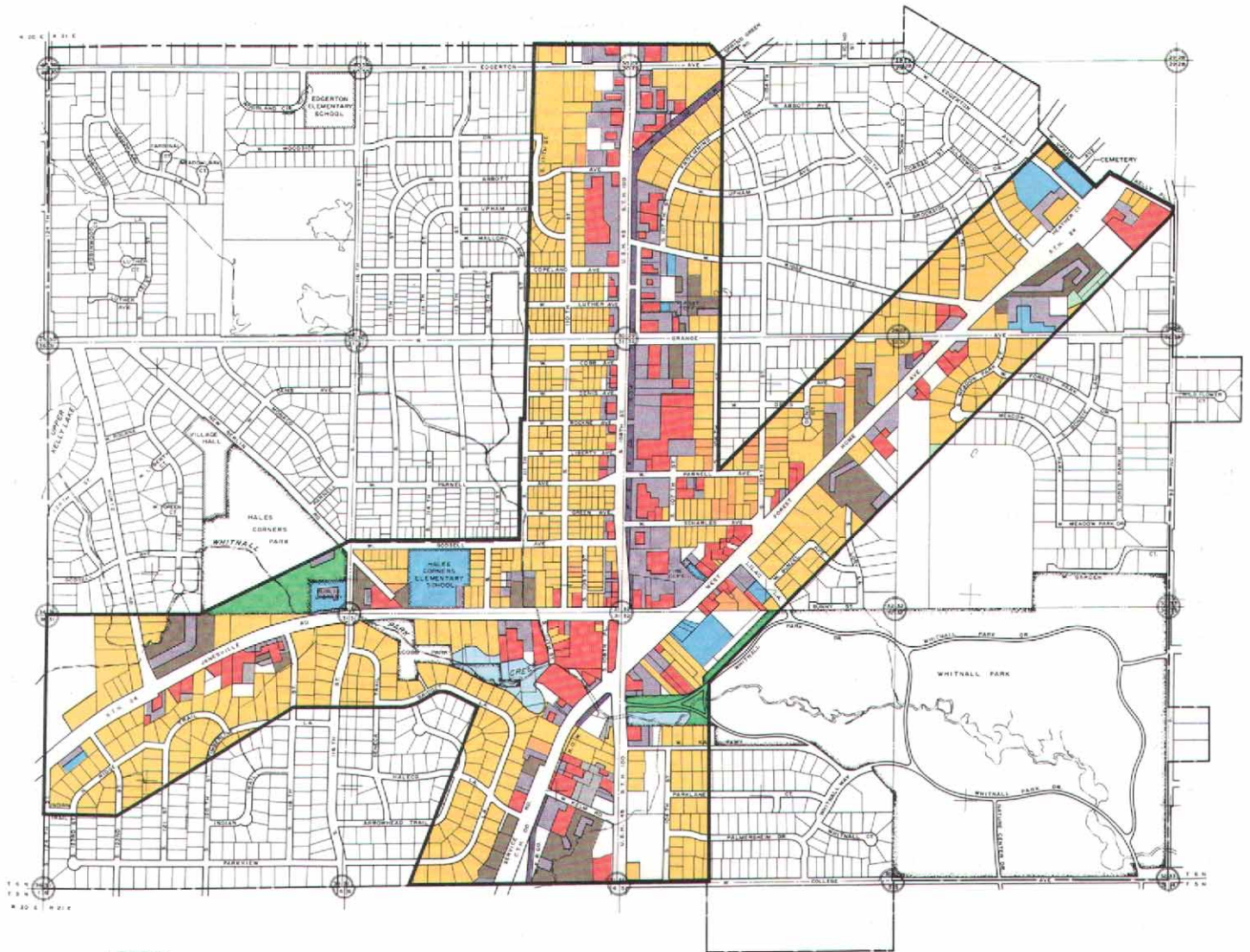


Source: SEWRPC.



# Map 7

## EXISTING LAND USE IN THE VILLAGE OF HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA: 1989



### LEGEND

- SINGLE-FAMILY RESIDENTIAL
- TWO-FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- COMMUNICATIONS AND UTILITIES
- OFF-STREET PARKING
- GOVERNMENTAL AND INSTITUTIONAL
- PARKS AND RECREATIONAL
- WETLANDS
- WOODLANDS
- AGRICULTURAL AND OTHER OPEN LANDS

Source: SEWRPC.



Table 9

## SUMMARY OF HISTORIC LAND USE IN THE VILLAGE OF HALES CORNERS: 1970, 1980, AND 1989

Land Use Category	Existing Land Use: 1970		Change 1970-1980		Existing Land Use: 1980		Change 1980-1989		Existing Land Use: 1989	
	Total Acres	Percent of Total	Total Acres	Percent Change	Total Acres	Percent of Total	Total Acres	Percent Change	Total Acres	Percent of Total
<b>Residential<sup>a</sup></b>										
Single-Family .....	935.4	45.7	36.7	3.9	972.1	47.5	56.1	5.8	1,028.2	50.2
Two-Family .....	2.1	0.1	0.0	0.0	2.1	0.1	7.5	357.1	9.6	0.5
Multi-Family .....	26.8	1.3	11.9	44.4	38.7	1.9	25.3	65.4	64.0	3.1
Subtotal	964.3	47.1	48.6	5.0	1,012.9	49.5	88.9	8.8	1,101.8	53.8
<b>Commercial<sup>a</sup></b> .....	72.7	3.6	10.8	14.8	83.5	4.1	20.4	24.4	103.9	5.1
<b>Industrial<sup>a</sup></b> .....	3.4	0.2	0.4	11.8	3.8	0.2	-0.8	-21.0	3.0	0.1
<b>Transportation and Utilities<sup>a</sup></b>										
Arterial Streets .....	81.2	4.0	-5.8	-7.1	75.4	3.7	2.1	2.8	77.5	3.8
Collector and Other Streets .....	212.6	10.4	7.2	3.4	219.8	10.7	4.0	1.8	223.8	10.9
Airport, Communications, Utilities, and Others .....	36.0	1.7	-15.6	-43.3	20.4	1.0	-1.9	-9.3	18.5	0.9
Subtotal	329.8	16.1	-14.2	-4.3	315.6	15.4	4.2	1.3	319.8	15.6
<b>Government and Institutional<sup>a</sup></b> .....	62.1	3.0	-7.2	-11.6	54.9	2.7	-4.3	-7.8	50.6	2.5
<b>Parks and Recreational<sup>a,b</sup></b> .....	150.5	7.3	0.0	0.0	150.5	7.3	4.9	3.3	155.4	7.6
<b>Natural Areas</b>										
Water .....	6.0	0.3	0.0	0.0	6.0	0.3	0.0	0.0	6.0	0.3
Wetlands .....	75.2	3.7	3.6	4.8	78.8	3.8	-1.2	-1.5	77.6	3.8
Woodlands .....	110.2	5.4	0.0	0.0	110.2	5.4	-6.5	-5.9	103.7	5.1
Subtotal	191.4	9.4	3.6	1.9	195.0	9.5	-7.7	-4.0	187.3	9.2
<b>Agricultural</b> .....	94.6	4.6	-9.8	-10.4	84.8	4.1	-74.3	-87.6	10.5	0.5
<b>Other Open Lands</b> .....	178.7	8.7	-32.2	-18.0	146.5	7.2	-31.3	-21.4	115.2	5.6
<b>Total</b>	2,047.5	100.0	--	--	2,047.5	100.0	--	--	2,047.5	100.0

<sup>a</sup>Includes related off-street parking.<sup>b</sup>Includes only areas used for intensive outdoor recreational activities.

Source: SEWRPC.

103 acres, or 14 percent of the total land uses in the Corridor. As indicated on Map 7, almost all of the commercial land uses were located in the Corridor, along the major arterial streets.

#### Industrial Land Use

From 1970 to 1989 the industrial land uses in the Village decreased by about 12 percent, even though this type of land use occupied less than 1 percent of the total land uses in both the Village and the Corridor during this period. In 1989, industrial land uses occupied about three acres, or less than 1 percent of the total land uses in both the Village and the Corridor. In 1989, all the industrial land uses were located in the Corridor in the south-central and southwestern areas of the Village.

#### Transportation and Utilities

Through the years 1970 to 1989, the total amount of transportation and utility land uses in the Village has remained relatively stable. In 1989, transportation and utility land uses, which include arterial streets, collector streets, minor land access streets, airports, communications, and utilities, accounted for approximately 320 acres of land, or about 16 percent of the total land uses in the Village, and about 158 acres of land, or about 22 percent, of the total land uses in the Corridor.

#### Governmental and Institutional Land Use

Tables 9 and 10, respectively, indicate that the total amount of governmental and institutional land uses has decreased by 18 percent for the

Table 10

**SUMMARY OF HISTORIC LAND USE IN THE VILLAGE OF  
HALES CORNERS CORRIDOR STUDY AREA: 1970, 1980, AND 1989**

Land Use Category	Existing Land Use: 1970		Change 1970-1980		Existing Land Use: 1980		Change 1980-1989		Existing Land Use: 1989	
	Total Acres	Percent of Total	Total Acres	Percent Change	Total Acres	Percent of Total	Total Acres	Percent Change	Total Acres	Percent of Total
<b>Residential<sup>a</sup></b>										
Single-Family .....	305.9	42.4	-8.4	-2.7	297.5	41.2	-15.9	-5.3	281.6	39.0
Two-Family .....	2.1	0.3	0.0	0.0	2.1	0.3	8.5	404.8	10.6	1.5
Multi-Family .....	24.7	3.4	11.9	48.2	36.6	5.1	16.3	44.5	52.9	7.3
Subtotal	332.7	46.1	3.5	1.1	336.2	46.6	8.9	2.6	345.1	47.8
<b>Commercial<sup>a</sup></b> .....	72.4	10.0	11.1	15.3	83.5	11.6	19.4	23.2	102.9	14.3
<b>Industrial<sup>a</sup></b> .....	3.4	0.5	0.4	11.8	3.8	0.5	-0.8	-21.0	3.0	0.4
<b>Transportation and Utilities<sup>a</sup></b>										
Arterial Streets .....	72.3	10.0	-0.7	-1.0	71.6	9.9	-1.5	-2.1	70.1	9.7
Collector and Other Streets .....	75.6	10.5	0.8	1.1	76.4	10.6	2.5	3.3	78.9	10.9
Airport, Communications, Utilities, and Others .....	9.3	1.3	0.0	0.0	9.3	1.3	0.0	0.0	9.3	1.3
Subtotal	157.2	21.8	0.1	0.1	157.3	21.8	1.0	0.6	158.3	21.9
<b>Government and Institutional<sup>a</sup></b> .....	39.4	5.5	-18.3	-18.3	32.2	4.5	-1.9	-5.9	30.3	4.2
<b>Parks and Recreational<sup>a,b</sup></b> .....	18.3	2.5	0.0	0.0	18.3	2.5	-1.8	-9.8	16.5	2.3
<b>Natural Areas</b>										
Water <sup>c</sup> .....	--	--	--	--	--	--	--	--	--	--
Wetlands .....	9.0	1.2	0.0	0.0	9.0	1.2	-2.5	-27.8	6.5	0.9
Woodlands .....	2.1	0.3	0.0	0.0	2.1	0.3	-0.2	-9.5	1.9	0.3
Subtotal	11.1	1.5	0.0	0.0	11.1	1.5	-2.7	-24.3	8.4	1.2
<b>Agricultural</b> .....	21.4	3.0	0.0	0.0	21.4	3.0	-10.9	-50.9	10.5	1.4
<b>Other Open Lands</b> .....	65.7	9.1	-7.9	-12.0	57.8	8.0	-11.3	-19.4	46.6	6.5
<b>Total</b>	721.6	100.0	--	--	721.6	100.0	--	--	721.6	100.0

<sup>a</sup>Includes related off-street parking.

<sup>c</sup>No existing large water surface areas.

<sup>b</sup>Includes only areas used for intensive outdoor recreational activities.

Source: SEWRPC.

Village and by 23 percent for the Corridor from 1970 to 1989. In 1989, this type of land use accounted for approximately 51 acres, or about 2 percent of the total land uses in the Village, and about 30 acres, or about 4 percent of the total land uses in the Corridor. Governmental and institutional land uses are located throughout the Village and the Corridor study area.

#### Park and Recreation Land Use

The amount of park and recreation land uses has increased by about 3 percent in the Village and decreased by 10 percent in the Corridor from 1970 to 1989. In 1989, parks and recreational land uses occupied about 155 acres, or 8 percent of the total land uses in the Village, and about 16 acres, or about 2 percent of the total Corridor study area.

#### Natural and Other Land Uses

Natural and other land uses include surface water, wetlands, woodlands, agricultural lands, and other open lands. During the period from 1970 to 1989, these types of land uses decreased by about 33 percent in both the Village and the Corridor. These decreases are due to the conversion of natural and other land uses to urban uses.

In 1989, natural areas occupied about 187 acres, or 9 percent of the total land uses in the Village, and about eight acres, or only 1 percent of the total land uses in the Corridor. In 1989, agricultural and other open lands totaled about 126 acres, or about 6 percent of the total area of the Village, and about 57 acres, or about 8 percent of the total area of the Corridor. The agricultural land use category includes all croplands, pasture

lands, and nurseries. Farm dwelling sites were classified as single-family residential land uses and all other farm buildings were included in the overall agricultural land use category.

## EXISTING HISTORIC SITES

Historic sites have been classified by the Commission into three general categories: structures, archaeological features, and other cultural features. In general, historic structures include architecturally or historically significant homes, churches, government buildings, mills, schools, and museums. Archaeological sites consist of areas occupied or utilized by humans in a way and for sufficient length of time to be marked by certain features, such as burial or effigy mounds, or to contain artifacts. Such sites are generally, although not always, associated with early American Indian settlements. Other cultural features include sites of early European settlements or are closely related to such settlements, and include the location, for example, of old plank roads, cemeteries, and settlement sites.

Historic surveys which identified historic sites in the Village include: the Wisconsin Inventory of Historic Places, maintained by the State Historical Society of Wisconsin, 1989; the inventory conducted in the preparation of the Southeastern Wisconsin Regional Planning Commission (SEWRPC) Planning Report No. 27, A Regional Park and Open Space Plan for Southeastern Wisconsin, 1977; and the inventory conducted by the Hales Corners Historical Society for its self-guided tour of the Village, 1982. In 1989, there were no sites in the Village listed in the National Register of Historic Places.

The most extensive historic inventory of the Village is the Hales Corners Historical Society survey, which lists 20 historic sites. The State Historical Society of Wisconsin survey lists 13 sites. The SEWRPC survey, which was conducted on a Regional basis, lists one historic site in the Village. As might be expected, there is some overlap among the surveys: nine sites are listed on both the Hales Corners Historical Society and the State Historical Society of Wisconsin surveys. Of the 26 historic sites, 24 sites contained historic buildings and two sites contained historic cemeteries, listed in the aforementioned surveys, 19 of these sites were located in the Corridor study area in 1989, as

shown on Map 8. This inventory indicates that the Village of Hales Corners has significant historic resources that should be considered in the planning process and preserved to the maximum extent possible.

## PUBLIC UTILITIES

Public utility systems are one of the most important elements influencing community growth and development. 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 resource base. This is particularly true of sanitary sewerage, water supply, and stormwater drainage facilities, which are in a sense modifications of, or extensions to, 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 the Village Corridor study area.

### Public Sanitary Sewer System

In 1989, the entire Corridor study area was served by a public sanitary sewer system operated by the Village, as shown on Map 9. Sewage treatment is provided by the facilities of the Milwaukee Metropolitan Sewage District.

### Public Water Supply System and Service Area

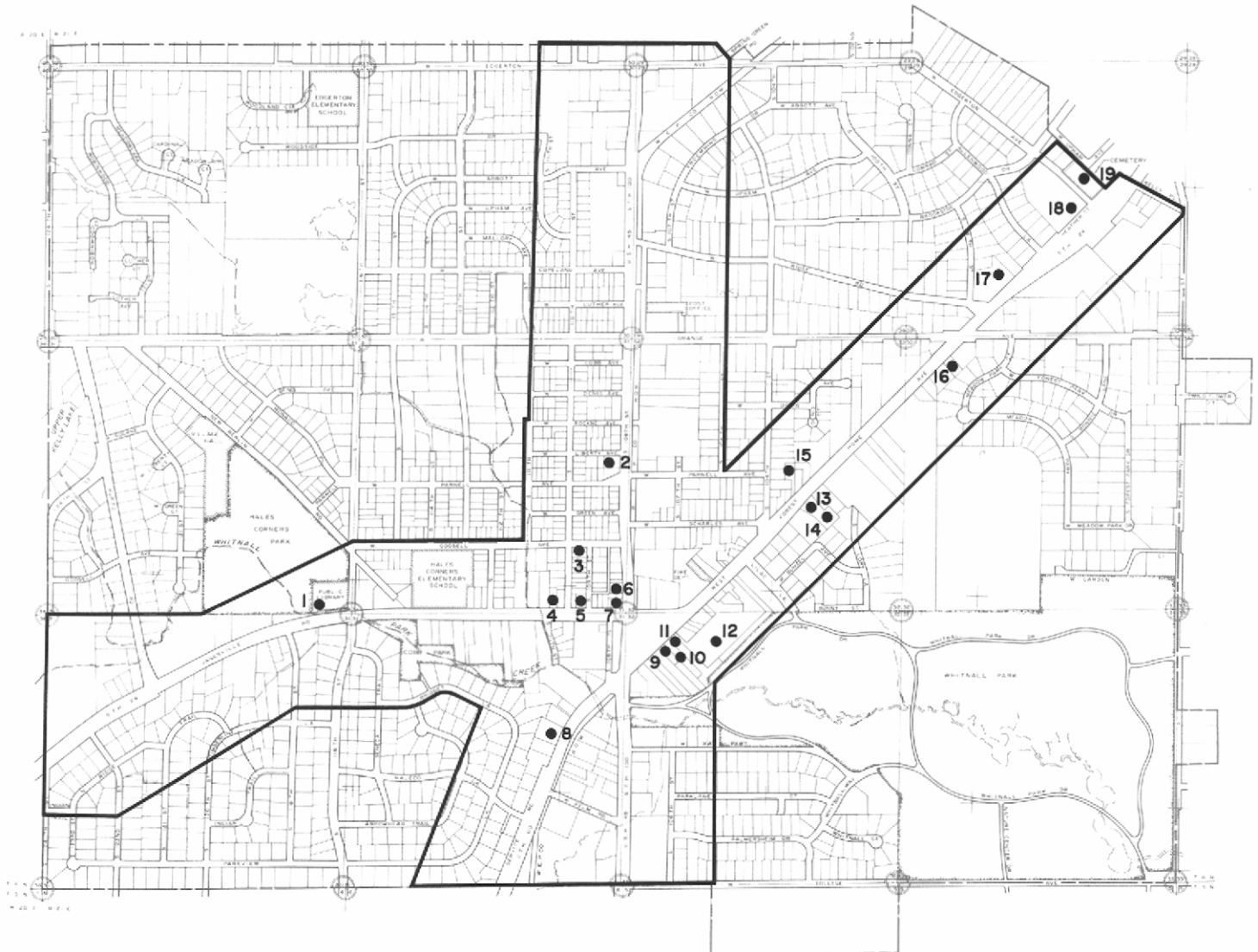
Only 415 acres, or about 57 percent, of the total Corridor study area in 1989 were served by a public water supply system providing Lake Michigan water treated by the City of Milwaukee. The facilities are owned and operated by the Milwaukee Water Works, as shown on Map 10, with the remaining areas served by private wells.

### Engineered Stormwater Drainage Facilities

In 1989, a portion of the study area was served by an engineered drainage system, as shown on Map 11, consisting primarily of storm sewers, but also including improved drainage ditches, swales, and minor watercourses. In 1986, the Regional Planning Commission completed a stormwater management plan for the Village. That plan is documented in SEWRPC Community Assistance Planning Report No. 121, A Stormwater Management Plan for the Village of Hales Corners, March 1986. The report contains specific recommendations for alleviating identified stormwater drainage problems, including

# Map 8

## LOCATION OF HISTORIC SITES IN THE VILLAGE OF HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA: 1989



### LEGEND

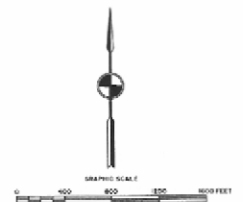
●12 HISTORIC SITE AND IDENTIFICATION NUMBER

#### HISTORICAL SITE IDENTIFICATION

1. W. BEN HUNT CABIN
2. EDWARD BODUS HOUSE
3. TELEPHONE EXCHANGE BUILDING
4. WILLIAM HALE HOUSE
5. MARY SCHMIDT HOUSE
6. GODSELL BUILDINGS
7. BOSCH HOTEL
8. HALE / COBB HOUSE
9. HENRY SCHMIDT HOUSE
10. SAYLE / MCSHANE / WILKINSON HOUSE
11. JACOB SIEGEL HOUSE
12. GERMAN EVANGELICAL CHURCH CEMETERY
13. C.P. LAWSON HOUSE
14. J.C. CROUNSE HOUSE
15. ADAM SCHUBRING HOUSE
16. JACOB WAGNER HOUSE
17. HANS STOLL HOUSE
18. ST. MARY'S CHURCH PARISH HOUSE
19. ST. MARY'S CHURCH CEMETERY

#### CURRENT USE

- LOG CABIN MUSEUM
- FLORIST SHOP, DENTAL OFFICE, RESIDENCE
- RESIDENCE
- RESIDENCE
- PHOTOGRAPHY STUDIO, RESIDENCE
- LAW OFFICES
- TAVERN, RESIDENCE
- RESIDENCE
- HAIR SALON, RESIDENCE
- RESIDENCE
- RESIDENCE
- CEMETERY
- RESIDENCE
- RESIDENCE
- RESIDENCE
- HAIR SALON, BASEBALL CARD SHOP, RESIDENCE
- WILDLIFE ART STUDIO, RESIDENCE
- CHURCH RESIDENCE
- CEMETERY

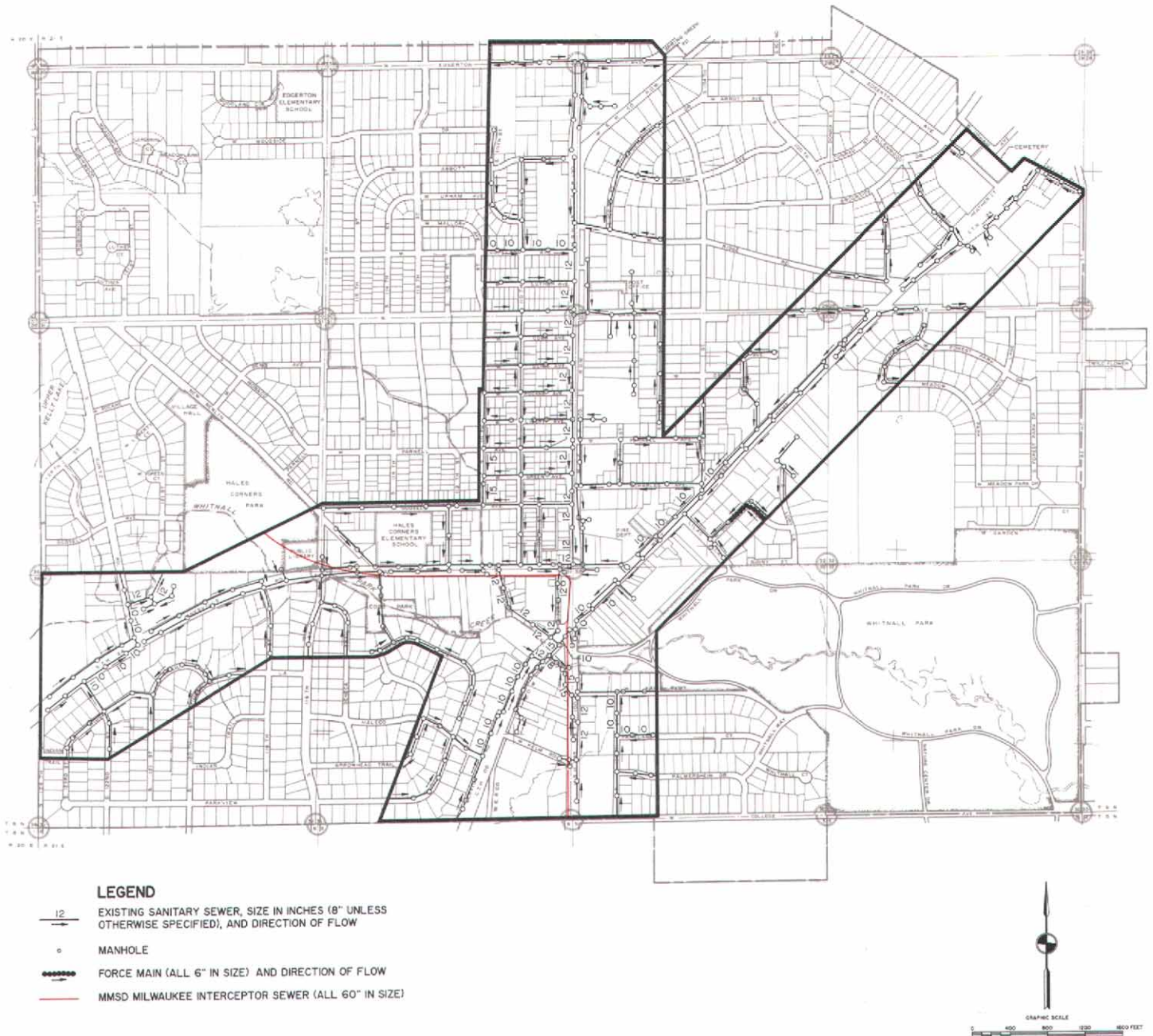


Source: SEWRPC.



# Map 9

## EXISTING SANITARY SEWER SYSTEM IN THE VILLAGE OF HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA: 1989



Source: SEWRPC.

Map 10

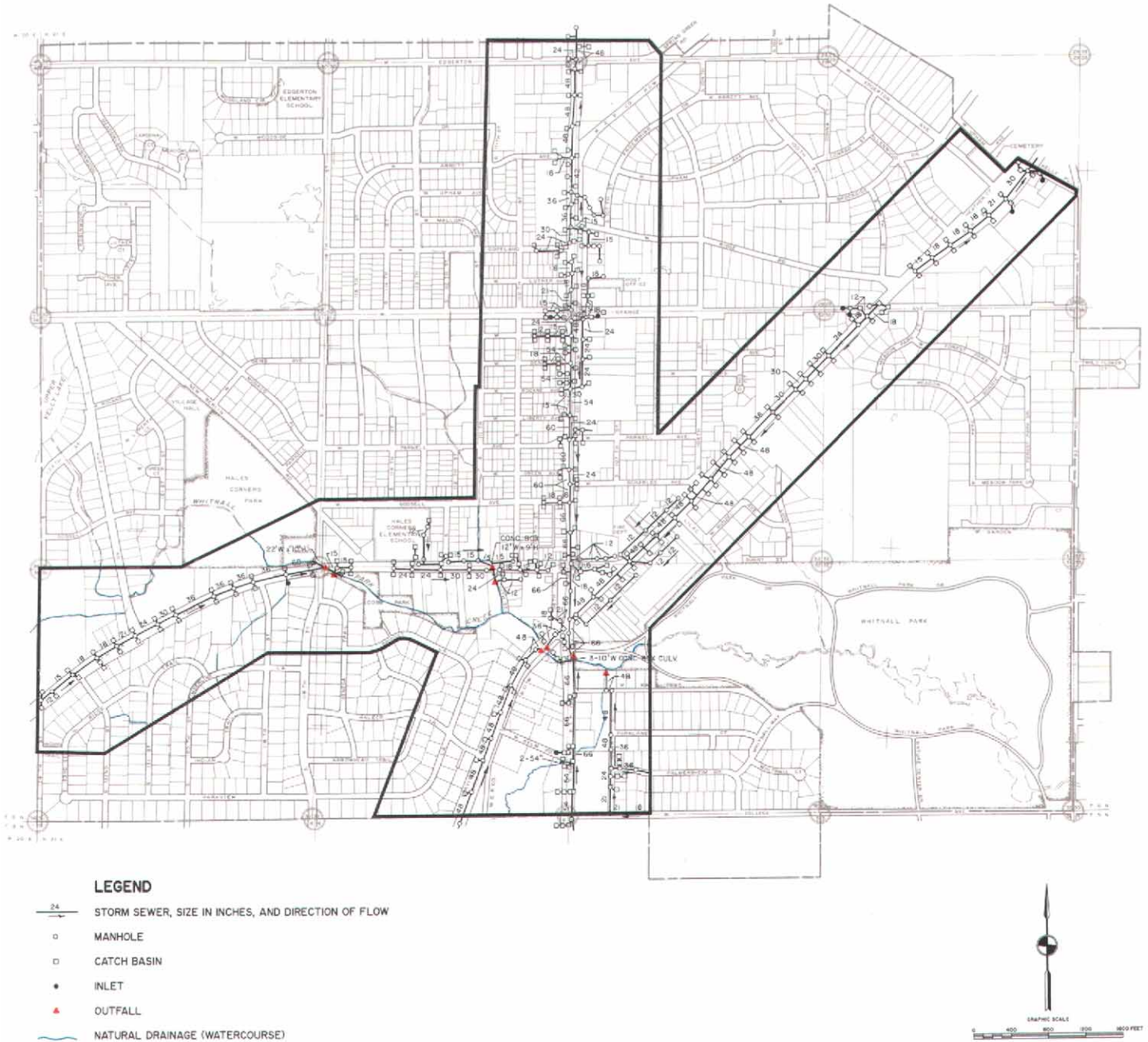
**EXISTING PUBLIC WATER SUPPLY SYSTEM AND SERVICE AREA IN THE  
VILLAGE OF HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA: 1989**



Source: SEWRPC.

# Map 11

## EXISTING STORM SEWER SYSTEM IN THE VILLAGE OF HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA: 1989



Source: SEWRPC.



recommendations for the construction of new and enlarged detention ponds, as well as the construction of relief storm sewers in the Village of Hales Corners.

### EXISTING TOPOGRAPHIC AND CADASTRAL MAPS

Topographic and cadastral maps were used in the preparation of development plans for the Corridor study area. Two-foot contour interval maps were prepared by quarter-section to the Regional Planning Commission specifications and drawn to a scale of one inch equals 100 feet in 1976. This topographic mapping is also available at a scale of one inch equals 200 feet in two maps, one for the east half and one for the west half of the Village. A cadastral map of the Village showing existing property lines and street rights-of-way was prepared by the Regional Planning Commission for use in the stormwater management plan, published in 1986, using information supplied by the Village and other sources.

### EXISTING LOCAL PLAN IMPLEMENTATION DEVICES

If the Village of Hales Corners land use plan, urban design plan, and transportation plan are to constitute a sound and realistic guide to decision making concerning the physical development of the Village Corridor study area, it must be based in part on careful consideration of existing pertinent land development regulations. The existing land development regulations which require examination in this respect include the existing Village zoning ordinance, land division ordinance, and official map. Each of these existing plan implementation devices is described herein as they affect the physical development of the Village.

#### Existing Zoning

Good community 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 development.

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, in the public interest, regulates and restricts the use of private property. A zoning ordinance divides a community into districts for the purpose of regulating: the use of land, water, and structures; the height, size, shape, and placement of structures; and the density of population. Zoning seeks to confine certain land uses to those areas of the community which are peculiarly 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 reduce fire hazards; and it seeks to prevent the overcrowding of land, traffic congestion, and the overloading of the utility systems or the uneconomic overdevelopment of such systems. Zoning should also seek to protect and preserve the natural resource base.

A single set of regulations applying to the entire community could not achieve the objectives of zoning, since different areas of the community differ in character and function. 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 for different types of districts may be different, but regulations within any given district must be uniform. Accordingly, a zoning ordinance consists of two parts: a text setting forth regulations which apply to each of the various zoning districts, together with related procedural, administrative, and legal provisions; and a map delineating the boundaries of the various districts to which the differing regulations apply.

Wisconsin enabling legislation requires that zoning regulations be made in accordance with a "comprehensive plan." There are a number of quite different interpretations of the meaning of "comprehensive plan." These vary from the idea that, to be deemed made in accordance with a comprehensive plan, zoning must regulate land use, building height, and lot area; through the idea that zoning must be applied to the entire corporate limits of the community; or must be based on careful and comprehensive study prior

to adoption; to the idea that the zoning must be based on 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 its accompanying zoning map must be carefully tailored to the individual community, or there are certain to be hardships created which may result in lawsuits and the possibility that the zoning may be set aside as arbitrary, capricious, or unconstitutional. The preparation of a zoning 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 so as 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 was utilized in the drafting of the zoning ordinance to meet the legal requirement of reasonableness. The lack of such data could result in the zoning ordinance being declared invalid.

All land development and building activity in the Village of Hales Corners is regulated by the Village's comprehensive zoning ordinance and floodplain ordinance as set forth in Chapter 8, "Zoning Code," and Chapter 17, "Floodplain Code," respectively, of the Municipal Code. These ordinances provide a total of nine zoning districts: four residential districts, two business districts, a commercial and light manufacturing district, a wetland and floodplain district, and a general floodplain district. The application and extent of these districts as of 1989 is shown on Map 12. Table 11 presents a brief summary of the zoning regulations applicable within each of these nine districts as of December 1989, including permitted and conditional uses, minimum lot size, minimum yard requirements, maximum building height, and the acreage and percentage of the Corridor within each zoning district.

The existing Village of Hales Corners zoning ordinance was initially adopted by the Village on May 11, 1957. The ordinance has been subsequently updated by the Village as problems arose concerning its application. The result of this vigilant effort by the Village has been a zoning ordinance which is cognizant of, and responsive to, changing conditions relating to both urban

development and redevelopment in the Village. The Village is presently in the process of amending and retitling Chapter 17 of the floodplain ordinance as the "Floodplain-Wetland Code," which would include the protection of "shoreland" wetlands as well as floodplain areas in the new General Floodplain-Wetland District. The Village's existing Floodplain-Wetland District and regulations would be replaced by this amendment.

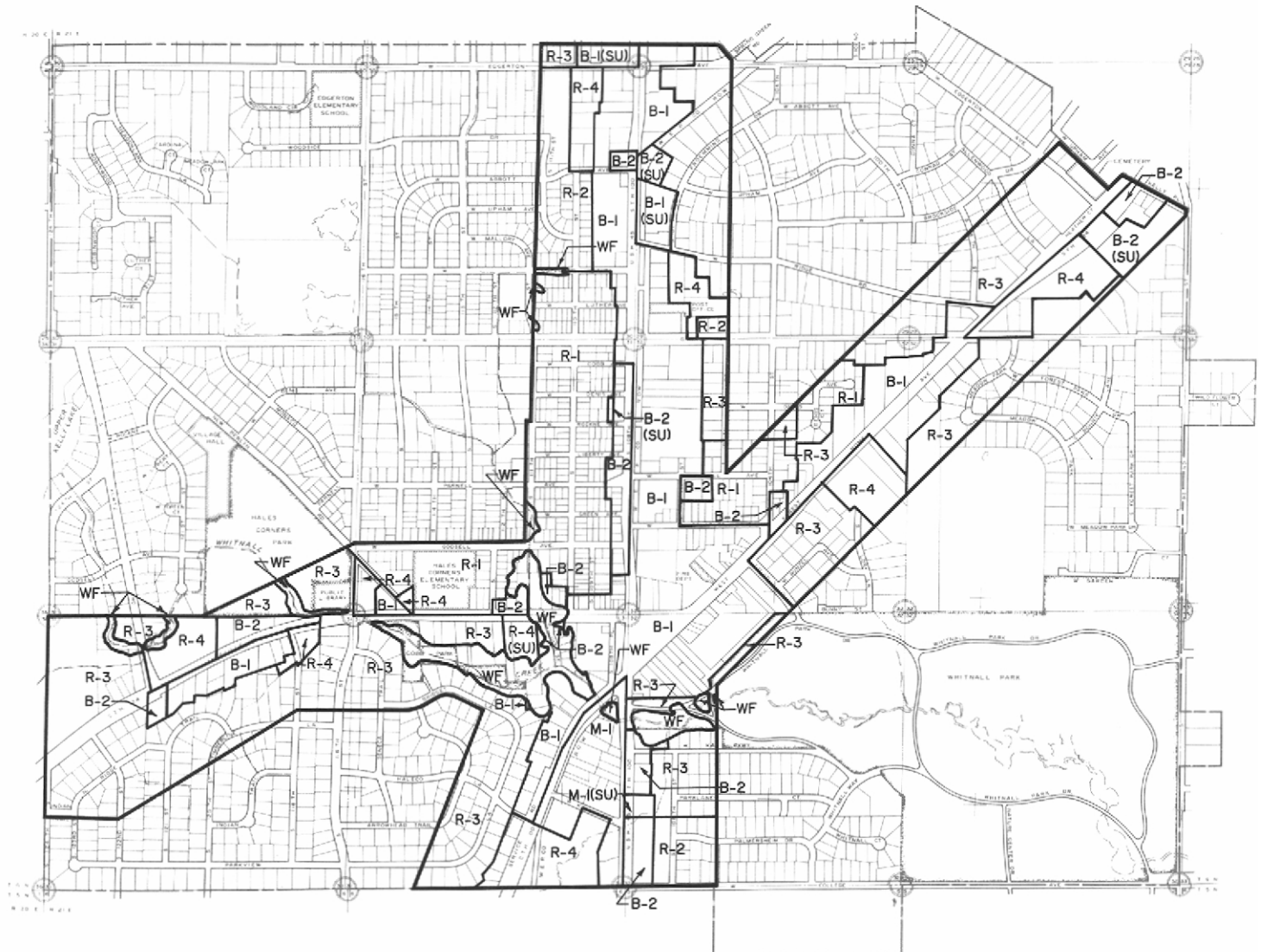
#### Zoning District Structure and Type

Two of the Village's nine zoning districts follows a variation of the "pyramid" approach to classifications of uses in zoning districts, rather than an "exclusive use district" approach. The pyramid approach to land use classification in zoning districts is typically based on a land use hierarchy so that zoning districts can be classified from the "highest" (the residential districts) to the "lowest" (the industrial districts), with the business districts somewhere between the two categories. Those uses in the highest class are permitted throughout the pyramid, and those at the lowest level typically permit residential and business uses along with permitted industrial uses. The "exclusive use district" concept, on the other hand, permits specific similar uses in a particular basic district but excludes these uses from other zoning districts of the ordinance.

The application of the pyramid approach in the Village of Hales Corners Zoning Code, albeit in modified form, is evident from an analysis of the permitted uses in the residential, business, and manufacturing districts. In the residential districts, the R-3 Residence District is considered the exclusive single-family residential district, while the R-1 and R-2 Residence Districts permits single-family and two-family residential uses. The R-4 Residence District also permits two-family residential uses and all uses permitted in the R-3 District. In the business districts, the B-2 Business District permits uses in the R-1 Residence District mixed with certain uses permitted in the B-1 District. With respect to the manufacturing district, the M-1 Commercial and Light Manufacturing District permits uses of the B-1 and B-2 Business Districts, excluding single-family, multi-family, and mixed residences. Using the pyramid approach in this fashion makes it very difficult to plan for limited and specific types of development in any area of the Village, the type of planning necessary to the implementation of a land use plan. The pyramid

Map 12

EXISTING ZONING IN THE VILLAGE OF HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA: 1989



LEGEND

- ZONING DISTRICT BOUNDARY
- R-1 RESIDENCE
- R-2 RESIDENCE
- R-3 RESIDENCE
- R-4 RESIDENCE
- B-1 BUSINESS
- B-2 BUSINESS
- M-1 COMMERCIAL AND LIGHT MANUFACTURING
- WF WETLAND AND FLOODPLAIN
- SU SPECIAL USE

Source: SEWRPC.

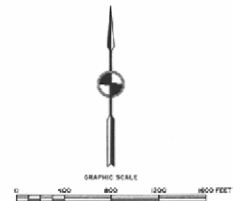


Table 11

## SUMMARY OF EXISTING ZONING IN THE VILLAGE OF HALES CORNERS CORRIDOR STUDY AREA: 1989

Zoning Districts	Principal Permitted Uses	Conditional Uses	Minimum Lot Size		Minimum Yard Requirement			Maximum Building Height (feet)	Existing 1989 Zoning	
			Total Area (square feet)	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)		Acres	Percent of Total
R-1 Residence	Single-family dwellings, two-family detached dwellings, nonprofit schools, community buildings, certain recreational uses	None	10,000 <sup>a</sup>	75 <sup>a</sup>	35	10	40	30	100.6	13.9
R-2 Residence	Single-family dwellings, nonprofit schools, community buildings, certain recreational uses	Two-family dwellings on certain streets	15,000	90	45	10	40	30	25.5	3.5
R-3 Residence	Single-family dwellings, nonprofit schools, community buildings, certain recreational uses	None	20,000	100	60	15	40	30	227.0	31.5
R-4 Residence	All permitted uses in the R-3 District, two-family dwellings	Private clubs, elderly housing, multi-family dwellings for more than two families or house-keeping units, planned residential developments, funeral homes	10,000 <sup>b</sup>	80	35	20 <sup>c</sup>	40	25	65.5	9.1
B-1 Business	Certain retail stores, offices, restaurants, services, accessory one and two-family residences	Private clubs, drive-in uses, parking and storage lots, automobile sales and services, elderly housing, veterinary services, uses proposed on lands designated with the SU—Special Use—symbol	--d,e	--d	10	--f	10	50	212.0	29.4
B-2 Business	All uses permitted in the R-1 District, offices, services	Financial institutions with drive-in facilities, uses proposed on lands designated with the SU symbol	--g	--d	10	--h	20	30	43.0	6.0
M-1 Commercial and Light Manufacturing	All uses permitted in the B-1 and B-2 District, excluding single-family, multi-family and mixed residences; certain manufacturing, processing and storage uses	Uses proposed on lands designated with the SU symbol	--i	--	50	--j	5	--	21.0	2.9



Table 11 (continued)

Zoning Districts	Principal Permitted Uses	Conditional Uses	Minimum Lot Size		Minimum Yard Requirement			Maximum Building Height (feet)	Existing 1989 Zoning	
			Total Area (square feet)	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)		Acres	Percent of Total
WF Wetland and Floodplain	Harvesting wild crops, hunting and fishing, utility distribution lines, public recreational uses	Crop farming with the preservation of wetlands, noncommercial recreational uses	20,000	100	60	15	40	30	27.0	3.7
General Floodplain	Agricultural uses, parking and loading areas, certain recreational uses, extraction of sand and gravel and other materials, marinas, railroads, bridges, streets, utility distribution lines	None	--	--	--	--	--	--	-- <sup>k</sup>	-- <sup>k</sup>
Total	--	--	--	--	--	--	--	--	721.6	100.0

<sup>a</sup>No building shall be erected or structurally altered on a lot which provides less than 5,000 square feet of land per family or housekeeping unit and less than 40 feet of lot width per building for each family or housekeeping unit.

<sup>b</sup>Lots shall provide at least 2,500 square feet of area for each efficiency or one-bedroom dwelling unit and at least 5,000 square feet of area for each two-bedroom or larger dwelling unit.

<sup>c</sup>For buildings where there is a detached garage on the north or west side, a side yard of not less than 10 feet shall be provided.

<sup>d</sup>Lot area and width shall be sufficient to meet the space requirements of the use, including principal and accessory structures, off-street parking, loading areas, and buttressing, buffer, area.

<sup>e</sup>Lots containing home occupations consisting of attached or combined living quarters for one or two families shall provide at least 5,000 square feet of area, in addition to the building site area used for the building area, the parking area, and the buffer area.

<sup>f</sup>Corner lots require a minimum side yard of 10 feet from street line or side lot line. Where a business district abuts a residential district, a side yard adjoining such residential district of at least 10 feet shall be provided.

<sup>g</sup>No building with its accessory structure used for business purposes shall occupy in excess of 40 percent of the lot area. The minimum lot area used wholly or partly for residential purposes shall be at least 10,000 square feet.

<sup>h</sup>Corner lots require a minimum side yard of 10 feet from street line or side lot line. For other than corner lots for buildings to be used for business purposes and for mixed purposes on all sides, a side yard of not less than seven feet shall be provided. Buildings used wholly for residential purposes shall conform to the side yard requirements of the R-1 Residence District.

<sup>i</sup>No building, with its accessory buildings, to be used for commercial or manufacturing purposes shall occupy in excess of 50 percent of the lot area. Buildings used wholly for residential purposes shall conform to the site area requirements of the R-1 Residence District.

<sup>j</sup>No buildings shall be erected or structurally altered whose side wall is closer than 10 feet to the side lot line of the south and east. No side yard shall be required on the north or west lot lines. However, buildings used wholly for residential purposes shall conform with the side yard requirements of the R-1 Residence District.

<sup>k</sup>The estimated area for this district was not determined due to the conflict between the WF Wetland Floodplain District and the General Floodplain District.

Source: Village of Hales Corners Zoning Code and SEWRPC.

approach also leads to undesirable land uses and does not adequately protect lands from incompatible uses.

#### The Land Division Ordinance

A land division ordinance is a public law regulating the dividing of land. Such regulation is necessary to ensure that: 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; adequate provision is made for necessary community and neighborhood facilities, such as parks, schools, churches, and shopping centers, so that a harmonious and desirable environment will result; adequate standards are met in the design of the land divisions and the improvement of the land being subdivided, with particular attention to such requirements as utilities, stormwater drainage street improvements, and lot improvements; a sound basis is provided for clear and accurate property boundary line records; and the health, safety, and general welfare of all citizens in the community, as well as the future occupants of the land to be subdivided, are protected.

Land division control regulations are an important means of implementing or carrying out a community comprehensive plan. As such, land division regulations should coordinate and integrate development with the comprehensive plan, and are, therefore, properly prepared in the context of such a plan. Since land division is far more than a means of marketing land, it is the first step in the process of building a community, substantial benefits are, therefore, to be derived from sound subdivision regulations. Much of the form and character of a community are 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 their design.

The present land division ordinance used by the Village of Hales Corners, Chapter 9 of the Municipal Code, referred to as "Subdivisions and Platting," was adopted on February 13, 1956, and subsequently amended. By reference and associated text, Chapter 9 of the Municipal Code

conforms to the procedures outlined in Chapter 236 of the Wisconsin Statutes for platting lands in the Village. The land division ordinance regulates the subdivision of land into five or more parcels of one and one-half acres each or less in area at any one time or by successive divisions within a period of five years, and the subdivision of a parcel of land into not more than four parcels by the use of certified survey maps.

The Village land division ordinance also 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 subdivision improvements such as streets, utilities, stormwater drainage facilities, street signs, and pedestrian crosswalks, and to reserve land for at least three years that are designated for future park and school sites to be acquired by the Village or School District.

#### Official Mapping

An 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 which can be utilized 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 railway rights-of-way, public transit facilities, 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, the location and extent of railway rights-of-way, public transit facilities, and parks and playgrounds.

The official map is intended to be used as a precise planning tool to implement public plans for streets, highways, waterways and parkways, railways, public transit facilities, parks, and playgrounds. One of the basic purposes of the official map 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 land 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. It thereby avoids the altogether too common situation of development being undertaken without knowledge or regard for the long-range plan, and thereby can help avoid public resistance when plan implementation becomes imminent. The Village of Hales Corners has an official map that shows all existing property lines, street right-of-way lines, park and school sites, and proposed street right-of-way lines. Following the adoption of the Village land use plan, urban design plan, and transportation plan for the Corridor study area, it may be necessary to amend the official map in order to facilitate the proper implementation of the adopted plans.

#### ANALYSIS OF FACTORS AFFECTING LAND USE AND URBAN DESIGN IN THE CORRIDOR STUDY AREA

The arterial streets and abutting lands located in the Corridor study area are a particularly important determinant of the character of the Village of Hales Corners and of its development and redevelopment potential. These major arterial highways serve vehicular traffic to, from, and between other communities of the greater Milwaukee area and pass through the center of the Village. The abutting lands are subject to a variety of development pressures which influence the efficiency and safety of the arterial streets and the workability and livability of the surrounding land uses. Because of certain present and potential future deficiencies in the arterial streets serving the Corridor, the need for traffic improvements, and the importance of the Corridor to the Village, these development pressures need to be identified and addressed as part of the overall planning effort for the Corridor. Accordingly, a more detailed study of land use development and of land use controls along these arterial streets was made, including an identification of physical development attributes and problems.

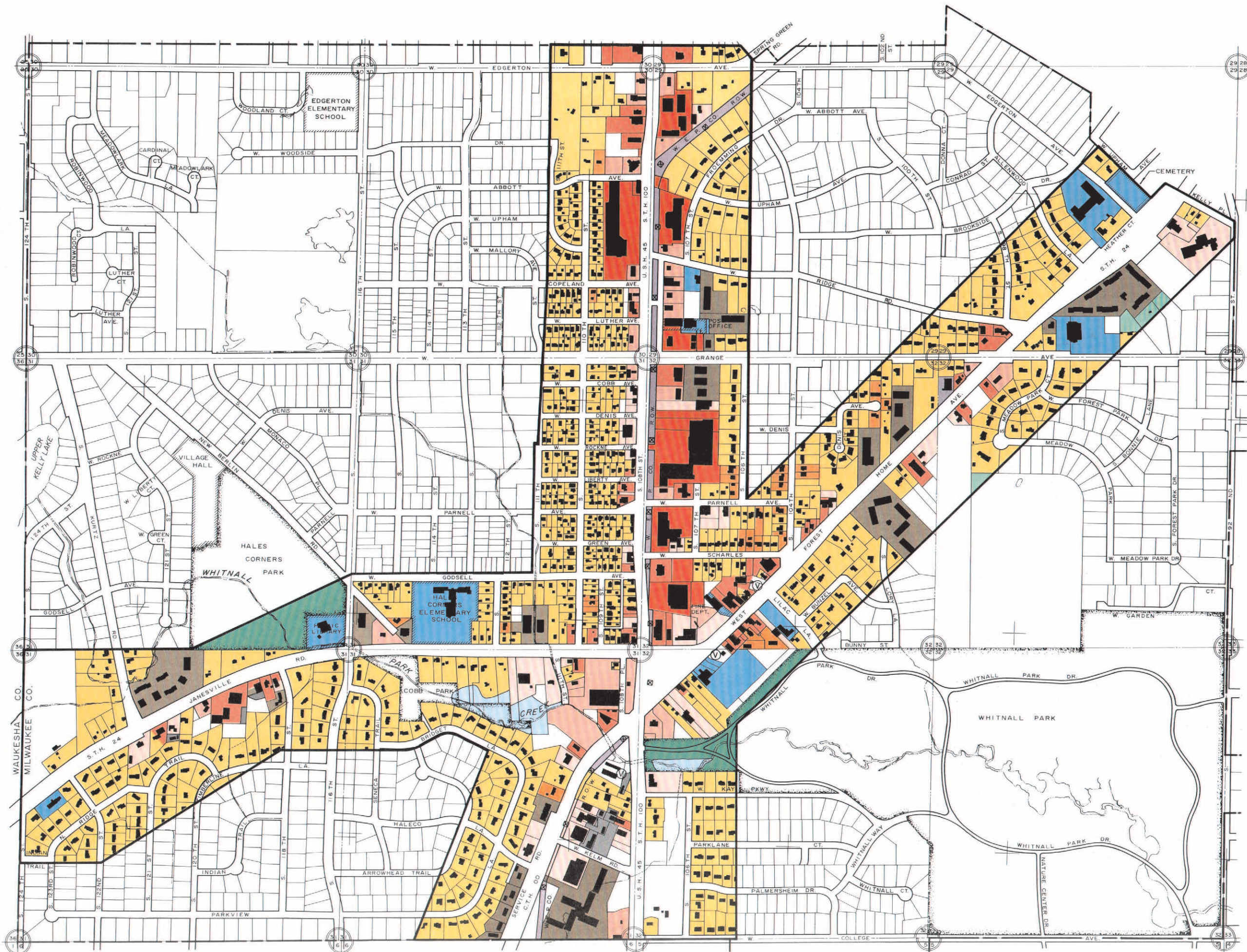
The arterial highways now known as S. 108th Street, W. Janesville Road, and W. Forest Home Avenue were initially built as roads connecting Milwaukee to other communities southwest of the City. Today, these three arterial streets, totalling approximately 4.5 miles in length, cross essentially the center of the Village. These facilities are characterized by generally wide cross-sections and predominantly commercial abutting land uses along S. 108th Street and by a mixture of residential and commercial uses along W. Janesville Road and W. Forest Home Avenue. Most of these land uses front directly on the arterials. Population growth within the Village has been accompanied by an increase in commercial development along these arterial streets. Thus, the familiar commercial "strip," with some of its functional problems and aesthetic shortcomings, has been forming along these arterial streets. The undesirability of such strip commercial development is widely recognized by professional planners; such development along these streets represents a particular threat to the maintenance of the desirable character of the Village. Strip commercial development is herein defined as commercial land use development usually one tier deep which fronts directly on a major arterial street or highway for a distance of one-eighth to one-quarter mile; it may have some noncommercial land uses interspersed with the commercial uses.

#### DETAILED EXISTING LAND USES ALONG THE SELECTED ARTERIAL STREETS

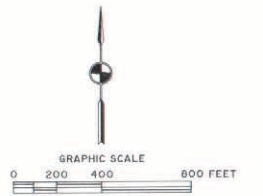
In 1989, the Regional Planning Commission staff conducted a special field survey to identify more precisely the types, characteristics, and extent of land uses along each of the selected arterial streets in the Village of Hales Corners Corridor study area. This survey was conducted in greater detail than the general land use survey for the entire Corridor study area described earlier in this chapter. It was intended to refine and detail the various types of commercial uses located adjacent to the arterial streets concerned. The land uses shown on Map 13 and quantified in Table 12 were grouped into 11 categories: residential; commercial; industrial; street and highway rights-of-way; communications and utilities; governmental and institutional; parks and recreational areas; wetlands; woodlands; agricultural and other open lands; and vacant lands.



**DETAILED EXISTING LAND  
USE IN THE VILLAGE OF HALES  
CORNERS ARTERIAL STREET  
CORRIDOR STUDY AREA: 1989**



- LEGEND**
- EXISTING STRUCTURE
  - EXISTING PYLON TOWER
  - RESIDENTIAL DEVELOPMENT**
    - LOW-DENSITY SINGLE-FAMILY RESIDENTIAL DEVELOPMENT (10,000 SQUARE-FOOT LOTS OR GREATER)
    - MEDIUM-DENSITY TWO-FAMILY RESIDENTIAL DEVELOPMENT (4.4 TO 8.7 DWELLING UNITS PER NET RESIDENTIAL ACRE)
    - HIGH-DENSITY MULTI-FAMILY RESIDENTIAL DEVELOPMENT (8.8 TO 17.4 DWELLING UNITS PER NET RESIDENTIAL ACRE)
  - COMMERCIAL DEVELOPMENT**
    - SHOPPING CENTER RETAIL SALES/SERVICE
    - GENERAL RETAIL SALES/SERVICE
    - AUTOMOBILE-ORIENTED RETAIL SALES/SERVICE
    - OFFICE AND PROFESSIONAL SERVICES
  - OTHER LAND USES**
    - INDUSTRIAL
    - COMMUNICATIONS AND UTILITIES
    - GOVERNMENTAL AND INSTITUTIONAL
    - PARKS AND RECREATIONAL
    - WOODLANDS
    - WETLANDS
    - OPEN LANDS
    - VACANT BUILDINGS (IN 1989)



Source: SEWRPC.



Table 12

## DETAILED EXISTING LAND USE IN THE VILLAGE OF HALES CORNERS CORRIDOR STUDY AREA: 1989

Land Use Type	Total Acres	Percent of Total
Residential (all types) <sup>a</sup> . . . . .	345.1	47.8
Commercial <sup>a</sup>		
Shopping Center Retail Sales and Services . . . . .	29.3	4.2
General Retail Sales and Services . . . . .	21.5	3.0
Automobile-Oriented Retail Sales and Services . . . . .	21.9	3.0
Offices and Professional Services . . . . .	30.2	4.2
Subtotal	102.9	14.3
Industrial <sup>a</sup> . . . . .	3.0	0.4
Street and Highway Rights-of-Way . . . . .	149.0	20.6
Communications and Utilities <sup>a</sup> . . . . .	9.3	1.3
Governmental and Institutional <sup>a</sup> . . . . .	30.3	4.2
Parks and Recreational <sup>a,b</sup> . . . . .	16.5	2.3
Wetlands . . . . .	6.5	0.9
Woodlands . . . . .	1.9	0.3
Agricultural and Other Open Lands . . . . .	54.6	7.6
Vacated Lands <sup>a,c</sup> . . . . .	2.5	0.3
Total	721.6	100.0

<sup>a</sup>Includes related off-street parking areas.

<sup>b</sup>Includes only areas used for intensive outdoor recreational activities.

<sup>c</sup>Includes lands with vacated buildings in 1989.

Source: SEWRPC.

Table 12 further divides and quantifies the commercial land use category into four subcategories: shopping center retail sales and services, general retail sales and services, automobile-oriented retail sales and services, and offices and professional services. In addition, Map 13 and Table 13 illustrate these four distinct groupings or types of commercial land uses.

Maps 13 and 14 and the accompanying Table 14 present an analysis of the frontage devoted to the various land use categories and subcategories along the selected arterial streets by street segments. The frontage along the arterial streets

concerned totals approximately 47,000 feet, or about nine miles, or approximately 23,500 feet, or about 4.5 miles, on each side. As indicated in Table 14, commercial land uses in 1989 occupied the largest proportion of the frontage along S. 108th Street, about 64 percent of the total frontage available. Street and highway rights-of-way occupied the second largest proportion of frontage along this arterial street, about 15 percent of the total frontage. In contrast, residential land uses still occupied the largest proportion of frontage along W. Janesville Road and W. Forest Home Avenue, about 49 and 41 percent, respectively, of the total frontage



**Table 13**

**GROUPINGS OF COMMERCIAL USES IN THE VILLAGE OF  
HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA**

Grouping Type	Typical Land Uses
Shopping Center Retail Sales and Services <sup>a</sup>	General merchandise stores Food stores Apparel and accessory stores Drug stores Department stores Gift shops Personal services Banks/savings and loan institutions Restaurants (not drive-in or drive-through)
General Retail Sales and Services <sup>b</sup>	Antique stores Neighborhood grocery stores Ice cream parlors Bakery stores Gift stores Sporting equipment stores Liquor stores Art galleries and supply stores Photography studios Boat sales Restaurants (not drive-in or drive-through)
Automobile-Oriented Retail Sales and Services <sup>c</sup>	Gasoline stations Automobile sales/services Car washes Drive-in banking Restaurants, including drive-in/drive-through types
Offices and Professional Services <sup>d</sup>	Professional offices, including travel agencies, financial agencies, and architectural, engineering, and other consulting agencies Clinics Funeral homes

<sup>a</sup>The shopping center retail sales and service grouping is generally characterized by a large shopping complex consisting of two or more individual businesses with shared onsite parking facilities for customer automobiles and a shopping environment geared to pedestrians.

<sup>b</sup>General retail sales and services are generally characterized by individual stores with onsite parking facilities for customer automobiles.

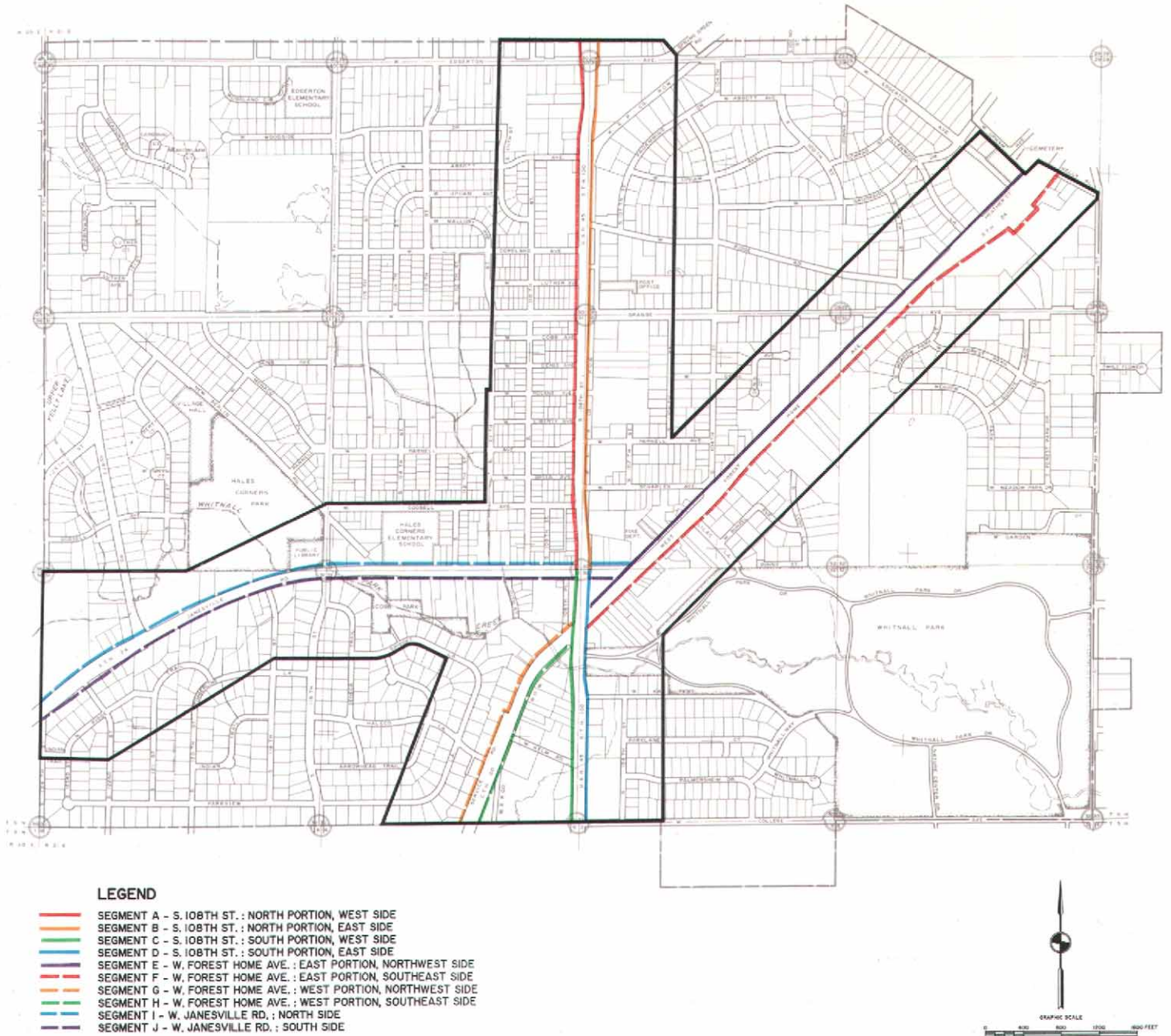
<sup>c</sup>Automobile-oriented retail sales and service grouping is basically not pedestrian-oriented onsite and is generally geared to customer automobiles.

<sup>d</sup>Offices and professional service grouping is characterized by onsite parking for customer automobiles and the provision of offices and services related to clinical services and "professional" services, such as financial services, travel agencies, and consultation services.

Source: SEWRPC.

# Map 14

## DEFINED SEGMENTS OF ARTERIAL STREET FRONTAGE IN THE VILLAGE OF HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA



Source: SEWRPC.

Table 14

**LINEAR FRONTAGE OF LAND USE TYPES ABUTTING SELECTED ARTERIAL  
STREET RIGHTS-OF-WAY IN THE VILLAGE OF HALES CORNERS: 1989**

S. 108th Street (STH 100/USH 45)										
Land Use Category	Segment A		Segment B		Segment C		Segment D		Total	
	Linear Frontage (feet)	Percent of Subtotal	Linear Frontage (feet)	Percent of Subtotal	Linear Frontage (feet)	Percent of Subtotal	Linear Frontage (feet)	Percent of Subtotal	Linear Frontage (feet)	Percent of Total
Residential (all types) <sup>a</sup> .....	570	10.3	--	--	370	14.0	520	19.7	1,460	9.0
Commercial <sup>a</sup>										
Shopping Center Retail Sales and Services .....	800	14.5	2,690	48.8	--	--	--	--	3,490	21.4
General Retail Sales and Services .....	1,300	23.6	910	16.5	80	3.0	--	--	2,290	14.0
Automobile-Oriented Retail Sales and Services .....	1,130	20.5	1,270	23.1	790	29.9	210	7.9	3,400	20.9
Offices and Professional Services .....	830	15.1	90	1.6	210	8.0	190	7.2	1,320	8.1
Subtotal	4,060	73.7	4,960	90.0	1,080	40.9	400	15.1	10,500	64.4
Industrial <sup>a</sup> .....	--	--	--	--	80	3.0	--	--	80	0.5
Street and Highway Rights-of-Way .....	880	16.0	420	7.6	400	15.2	710	26.9	2,410	14.8
Communications and Utilities <sup>a,b</sup> .....	--	--	130	2.4	--	--	--	--	130	0.8
Governmental and Institutional <sup>a</sup> .....	--	--	--	--	--	--	--	--	--	--
Parks and Recreational <sup>a,c</sup> .....	--	--	--	--	--	--	300	11.4	300	1.8
Wetlands and Woodlands .....	--	--	--	--	--	--	--	--	--	--
Agricultural and Other Open Lands .....	--	--	--	--	710	26.9	710	26.9	1,420	8.7
Vacated Lands <sup>a,d</sup> .....	--	--	--	--	--	--	--	--	--	--
Subtotal	5,510	100.0	5,510	100.0	2,640	100.0	2,640	100.0	--	--
Total	--	--	--	--	--	--	--	--	16,300	100.0

W. Janesville Road (STH 24)						
Land Use Category	Segment I		Segment J		Total	
	Linear Frontage (feet)	Percent of Subtotal	Linear Frontage (feet)	Percent of Subtotal	Linear Frontage (feet)	Percent of Total
Residential (all types) <sup>a</sup> .....	3,820	59.1	2,400	37.9	6,220	48.6
Commercial <sup>a</sup>						
Shopping Center Retail Sales and Services .....	--	--	--	--	--	--
General Retail Sales and Services .....	510	7.9	900	14.2	1,410	11.0
Automobile-Oriented Retail Sales and Services .....	300	4.7	600	9.5	900	7.1
Offices and Professional Services .....	260	4.0	880	13.9	1,140	8.9
Subtotal	1,070	16.6	2,380	37.6	3,450	27.0
Industrial <sup>a</sup> .....	--	--	--	--	--	--
Street and Highway Rights-of-Way .....	320	5.0	770	12.2	1,090	8.5
Communications and Utilities <sup>a</sup> .....	20	0.3	--	--	20	0.2
Governmental and Institutional <sup>a</sup> .....	880	13.6	270	4.3	1,150	9.0
Parks and Recreational <sup>a,c</sup> .....	--	--	--	--	--	--
Wetlands and Woodlands .....	--	--	--	--	--	--
Agricultural and Other Open Lands .....	350	5.4	510	8.0	860	6.7
Vacated Lands <sup>a,d</sup> .....	--	--	--	--	--	--
Subtotal	6,460	100.0	6,330	100.0	--	--
Total	--	--	--	--	12,790	100.0

Table 14 (continued)

W. Forest Home Avenue (STH 24/CTH 00)										
Land Use Category	Segment E		Segment F		Segment G		Segment H		Total	
	Linear Frontage (feet)	Percent of Subtotal	Linear Frontage (feet)	Percent of Subtotal	Linear Frontage (feet)	Percent of Subtotal	Linear Frontage (feet)	Percent of Subtotal	Linear Frontage (feet)	Percent of Total
Residential (all types) <sup>a</sup> . . . . .	2,380	37.0	3,320	48.5	1,230	50.2	390	18.0	7,320	40.9
Commercial <sup>a</sup>										
Shopping Center Retail										
Sales and Services . . . . .	--	--	--	--	--	--	--	--	--	--
General Retail Sales										
and Services . . . . .	1,060	16.5	850	12.4	220	9.0	--	--	2,130	11.9
Automobile-Oriented Retail										
Sales and Services . . . . .	190	2.9	390	5.7	240	9.8	--	--	820	4.6
Offices and										
Professional Services . . . . .	480	7.5	880	12.8	520	21.2	630	29.0	2,510	14.0
Subtotal	1,730	26.9	2,120	30.9	980	40.0	630	29.0	5,460	30.5
Industrial <sup>a</sup> . . . . .	--	--	--	--	--	--	--	--	--	--
Street and Highway										
Right-of-Ways . . . . .	1,360	21.2	290	4.2	190	7.8	60	2.8	1,900	10.6
Communications										
and Utilities <sup>a,b</sup> . . . . .	220	3.4	--	--	--	--	--	--	220	1.2
Governmental and										
Institutional <sup>a</sup> . . . . .	290	4.5	360	5.3	--	--	--	--	650	3.6
Parks and Recreational <sup>a,c</sup> . . . . .	--	--	--	--	--	--	--	--	--	--
Wetlands and Woodlands . . . . .	--	--	--	--	--	--	--	--	--	--
Agricultural and Other										
Open Lands . . . . .	310	4.8	600	8.8	50	2.0	840	38.7	1,800	10.1
Vacated Lands <sup>a,d</sup> . . . . .	140	2.2	160	2.3	--	--	250	11.5	550	3.1
Subtotal	6,430	100.0	6,850	100.0	2,450	100.0	2,170	100.0	--	--
Total	--	--	--	--	--	--	--	--	17,900	100.0

<sup>a</sup>Includes related off-street parking.

<sup>b</sup>The portion of the Wisconsin Electric Power Company right-of-way that aligns parallel with the S. 108th Street and W. Forest Home Avenue rights-of-way were not included in this category.

<sup>c</sup>Includes only areas used for intensive outdoor recreational activities.

<sup>d</sup>Includes lands with vacated buildings in 1989.

Source: SEWRPC.

available on each street. Commercial land uses occupied the second largest proportion of frontage along these two arterial streets, about 27 percent of the total frontage on W. Janesville Road, and about 31 percent of the total frontage on W. Forest Home Avenue.

By examining the land use analyses depicted in Map 13 and in Tables 12 and 14, several inferences can be drawn about land use development along each of the arterial streets concerned:

- Strip commercial development interspersed with single- and multi-family residential land uses is evident along all three arterial streets. Each side of S. 108th Street is strongly characterized by a long strip of predominantly commercial development. This type of land use pattern, increasingly mixed with multi-family residential developments, is occurring along both sides of W. Janesville Road and W. Forest Home Avenue and tends to cause the general character of the Village to deteriorate.

- The intense commercial land uses which abut the three arterial streets often back onto uses of a lesser intensity, primarily single-family residential development. For the most part, no transitional hierarchy of land use development exists between the land uses of higher intensity and those of lower intensity within the Corridor study area.
- Single-family residential land uses located between predominantly commercial uses fronting on the arterial streets are evident along the west side of S. 108th Street, the north and south sides of W. Janesville Road, and the east and west sides of W. Forest Home Avenue. This type of land use pattern is undesirable since it is basically unstable.
- A significant proportion of automobile-oriented retail sales and service and shopping center retail sales and service uses in the Corridor study area front along both the east and west sides of S. 108th Street from W. Forest Home Avenue to the north corporate limits of the Village. A site occupied by either of these specific commercial uses is more likely to generate a larger volume of traffic than other types of commercial land uses, thus contributing to the traffic volume on the abutting arterial and to potential traffic conflicts along the three arterials concerned, especially along S. 108th Street.
- All four specific types of commercial uses are dispersed rather than concentrated along the arterial highways. This dispersal has contributed to the seemingly unorganized form of commercial development along these arterial streets, especially along both sides of W. Janesville Road and W. Forest Home Avenue.
- The industrial uses located in the south-central portion of the Corridor study area between W. Forest Home Avenue and S. 108th Street abut single-family residential uses and are mixed with some commercial uses, rather than being contained in a buffered industrial area.
- The existing natural open areas provided by Cobb Park and Whitnall Park, located in the south-central portion of the Corridor study area, are delineated by the Regional Planning Commission as environmental

corridors. The secondary environmental corridor located in Cobb Park does not noticeably interlink with the primary and secondary corridor located in Whitnall Park, which is vital to the preservation of the limited remaining natural resource base of the Village.

- Two governmental and institutional uses appear to be poorly located in the Corridor study area. The existing post office east of S. 108th Street and north of W. Grange Avenue is not visible from the adjacent arterial streets. The existing fire station is adjacent to automobile-oriented commercial uses, near the major intersection of W. Janesville Road and W. Forest Home Avenue, and subject to conflicts between the movement of emergency vehicles and arterial traffic.

#### EXISTING ZONING ALONG THE SELECTED ARTERIAL STREETS

The zoning of the Corridor, including of the properties located along the arterial streets concerned, as of 1989, is shown on Map 12 and is summarized in Table 11. A total of nine zoning districts are applied to lands in the Village.

Permitted Uses and Zoning District Structure  
Table 11 indicates that the structure of the Hales Corners zoning ordinance for the R-1, R-2, R-4, B-2, and M-1 Districts is a modified pyramid, increasingly nonexclusive. This approach, as explained earlier in this chapter, envisions zoning districts structured to accommodate uses from the highest, residential, to the lowest, industrial, with business uses somewhere between the two extremes. Districts zoned for the highest use permit only that use, while districts zoned for the lowest use permit some or all uses from the higher districts. As this approach pertains to the Village of Hales Corners, and in particular to the zoning along the selected arterial streets, the R-1 and R-2 Residence Districts permit single-family residential uses, two-family residential uses, community buildings, and certain institutional and recreational uses; the R-3 Residence District permits single-family residential uses only and certain institutional and recreational uses. The R-4 Residence District permits single- and two-family residential uses and all uses permitted in the R-3



District. The B-2 Business District permits uses in the R-1 Residence District together with certain uses permitted in the B-1 Business District. The M-1 Commercial and Light Manufacturing District permits uses of the B-1 and B-2 Business Districts, excluding single-family, multi-family, and mixed residences. Such use of the pyramidal approach makes it difficult to influence the location and character of specific types of development in accordance with a logical plan.

The "exclusive use district" approach to organizing zoning ordinances, on the other hand, offers a more refined means for land use plan implementation. This approach to zoning, as described earlier in this chapter, divides principal permitted uses into separate, distinct, and mutually exclusive classes, with the permitted uses within each district based upon a limited number of compatible functions. Under the exclusive use district approach, business districts, for example, permit only a limited number of functional classifications of business uses, thus fostering commercial land use clustering of functionally related business uses. This type of zoning is essential to any effective implementation of a detailed land use plan for the Hales Corners Corridor study area.

#### Strip Zoning

In the past it has been a common practice within the greater Milwaukee area to zone all lands fronting on arterial streets and highways for either commercial or multi-family residential development. This practice has resulted in what is called "strip" zoning along major highways. Such zoning has often been applied without regard to the actual demand for those types of uses. Map 12 illustrates how this occurs along the selected arterial streets in the Corridor study area through the use of the sprawling B-1 and B-2 Business Districts. Strip zoning is undesirable because it diminishes the appearance of major arterials, fosters traffic hazards and congestion and impairs the capacity and level of service provided by arterial streets and thereby the public investment in such arterials, encourages mixed development with attendant instability, promotes the indiscriminate use of outdoor advertising, and promotes land speculation, impairing the development potential of the area. In addition, it often results in marginal urban development, poorly maintained vacant land along public ways, and can create unusable parcels of land.

Table 15 documents the linear frontage of the existing zoning districts as applied in 1989 along the three major arterial streets studied. Business district zoning along each of the arterial streets, including both sides of the right-of-way, accounted for over 85 percent of the total frontage on S. 108th Street, about 40 percent of the total frontage on W. Janesville Road, and about 56 percent of the total frontage on W. Forest Home Avenue.

#### Transitional Zoning

Transitional zoning may be defined as the placement of an intermediate use between two clearly incompatible uses, such as between single-family residences and commercial or industrial uses. It has been common practice to use an intermediate zoning district to obtain such a transition. An example is the use of a multi-family residential district between a commercial or industrial zoning district and a single-family residential district. The logic of such application of zoning districts as transition zones may be questioned, particularly with respect to the use of multi-family residences to buffer commercial and industrial districts. If the presence of a commercial or industrial district is harmful to the health, safety, and welfare of a few families residing in single-family dwellings, its harmful effects are not minimized by replacing a few such families with many families residing in multi-family dwellings. Within residential areas, however, it is quite logical to buffer the higher density residential and multi-family residential areas from the lower density, single-family residential uses by means of medium-density, two-family residential uses.

For the most part, no transitional hierarchy of zoning, or of land use development, exists between areas of high-intensity land uses and areas of uses of lower intensity within the Corridor study area. As already noted in the detailed land use section, the intense commercial and multi-family residential uses which abut the three arterial streets concerned often back onto uses of a lesser intensity such as single-family residential uses.

#### Buffer Yard Requirements

A buffer yard may be defined as a landscaped area that surrounds a land use and screens or blocks visual nuisances, air and noise pollutants, or other negative impacts associated with that use. Buffer yards can benefit the Village in

Table 15

**LINEAR FRONTAGE OF ZONING DISTRICTS ABUTTING SELECTED ARTERIAL  
STREET RIGHTS-OF-WAY IN THE VILLAGE OF HALES CORNERS: 1989**

Zoning District	S. 108th Street (STH 100/USH 45)		W. Janesville Road (STH 24)		W. Forest Home Avenue (STH 24/CTH 00)		Total	
	Linear Frontage <sup>a</sup> (feet)	Percent of Subtotal	Linear Frontage <sup>a</sup> (feet)	Percent of Subtotal	Linear Frontage <sup>a</sup> (feet)	Percent of Subtotal	Linear Frontage <sup>a</sup> (feet)	Percent of Total Frontage
R-1 Residence . . . .	--	--	770	6.0	--	--	770	1.6
R-3 Residence . . . .	150	0.9	4,120	32.2	2,680	15.0	6,950	14.8
R-4 Residence . . . .	--	--	1,520	11.9	3,470	19.4	4,990	10.6
B-1 Business . . . . .	10,050	61.7	3,570	27.9	9,070	50.7	22,690	48.3
B-2 Business . . . . .	3,740	23.0	1,480	11.6	1,030	5.7	6,250	13.3
M-1 Commercial and Light Manufacturing . . .	2,010	12.3	--	--	1,440	8.0	3,450	7.4
WF Wetland and Floodplain . . .	350	2.1	1,330	10.4	210	1.2	1,890	4.0
Subtotal	16,300	100.0	12,790	100.0	17,900	100.0	--	--
Total	--	--	--	--	--	--	46,990	100.0

<sup>a</sup>Frontage includes linear distance abutting each side of the right-of-way.

Source: SEWRPC.

protecting property values by separating visually and physically dissimilar land use types and intensities. The Village's zoning ordinance does not contain specific provisions for such buffer yards and attendant landscaping. These buffer yards may be used to locate a variety of measures, such as earth berms with landscape plantings, fencing and walls with plantings, landscaped open spaces, streets and other public ways, graduated changes in land use intensity, and grade separations, in order to accomplish effectively the buffering between dissimilar land use types and intensities.

#### Spot Zoning

Spot zoning may be defined as action by a zoning authority which grants a single lot or other small area of land privileges which are not extended to similar land in the vicinity. Spot zoning is, in general, against sound public policy and obnoxious to the law. It is instantly suspect of being done to accommodate a particular special interest and not for the general welfare of the community. It may, in effect, grant a monopoly to one landowner and makes the community vulnerable to similar spot zoning

requests by various speculators who hope to multiply their profits at the expense of the community by the simple expediency of obtaining a change in the zoning district map. On the north side of W. Janesville Road and west of New Berlin Road, one lot zoned B-1 Business District in this location represents spot zoning since it is completely surrounded by residential zoning districts. The redistricting of small parcels of land can be justified only when it is done in furtherance of a duly adopted land use plan designed to serve the best interests of the community as a whole. If the public interest is indeed served by permitting, for example, zoning of a small area within a residential district in accordance with a duly adopted neighborhood development plan to accommodate a needed neighborhood shopping area, the zoning does not constitute spot zoning per se.

#### Zoning Districts for

##### Institutional Uses and Open Lands

Zoning is intended to regulate the kinds of buildings which can be erected in the various zoning districts and the uses to which they may be put. The existing local zoning ordinance does

not contain an "exclusive" institutional zoning district for regulating government and institutional uses. These uses are currently located in residential and business districts. It is also possible to regulate open lands containing natural resource-related elements. At present, the Hales Corners zoning ordinance has only one zoning district, the Wetland and Floodplain District, which, to some degree, regulates the preservation of open space. The existing ordinance does not provide a conservancy district or a park district that could be used to preserve needed open space, protect natural resources, and generally enhance the environment.

#### Lot Sizes and Setback Requirements

Minimum lots sizes and setback requirements in the existing Village of Hales Corners Zoning Code are set forth in Table 11. The B-1 and B-2 Business Districts and the M-1 Commercial and Light Manufacturing District do not require minimum lot areas nor widths. This, combined with strip zoning, has resulted in the location of many small commercial establishments along the three major arterial streets, especially on the west side of S. 108th Street, each with its own entrance and exit, creating serious safety problems and adversely affecting the traffic capacity and level of service on the arterial concerned, destroying the public investment in the arterial as an effective facility. Requiring no minimum lot sizes for commercial and industrial districts and a minimum front yard setback of only 10 feet for the business districts may also present difficult and costly problems if the street on which these small lots front must be widened.

#### Other Zoning Provisions

The Hales Corners zoning ordinance does not currently provide design criteria to guide the Village Building Board in the review of proposed building and site plans. These design guidelines would help the Board in determining the compatibility of proposed design features for individual developments with surrounding uses. The Village is currently in the process of creating such provisions in the zoning ordinance. Certain design-related requirements which could otherwise significantly enhance the Village image are also not provided in the zoning ordinance. These include requiring interior parking lot landscaping, parking lot screening from public streets, sign and building foundation plantings, and perimeter landscaped strips.

## **VISUAL AND URBAN DESIGN CHARACTERISTICS OF THE CORRIDOR STUDY AREA**

The Corridor Plan Advisory Committee attempted to identify both positive and negative visual characteristics of the Corridor study area. Careful consideration of these characteristics is important in the creation of an urban design plan for the Village.

#### Visual and Urban Design Problems

Several broad areas of concern should be addressed with respect to the visual and urban design characteristics of the Corridor, including landscape plantings, overhead utility lines, building facades, signage, and the spatial interaction and spatial linking elements found in the Corridor study area. More particularly, consideration should be given to yards, urban scale and mass, urban rooflines, materials, colors, lighting, and the various types of street furniture which together contribute to the overall appearance of the Corridor. Urban design problems pertaining to transportation-related elements are discussed further in Chapter IV and V. Existing visual and urban design problems, including the following, are illustrated on Map 15 and the attendant photographs:

- The large triangular landscaped island that is located almost in the center of the Village and surrounded by the three heavily traveled arterials is not easily accessible and effectively utilized as an identifiable "Village Center."
- Many residents perceive the Village to be divided by S. 108th Street (STH 100 and USH 45) into an "East Side" and a "West Side." The urban mass in the northern segment of S. 108th Street appears to be symmetrically unbalanced if the centerline of this arterial street is assumed to serve as the line of symmetry, thus creating the impression of a divided Corridor. This visual perception is due specifically to the location, or the absence of, physical elements, such as urban masses consisting of three-dimensional objects like shrubs, trees, berms, fences, walls, or buildings, on both sides of the arterial and the substantial variation in building setbacks, especially on the west side of the arterial. The east side

of the arterial is separated from adjacent parking lots by a wide utility right-of-way with tall electric power transmission line towers. This problem and potential solutions are further illustrated in Chapter IV.

- The supporting structures and overhead wires of the electric power transmission (towers) and distribution (utility lines hung on wooden poles or towers) facilities, combined with many existing pylon signs create a sense of visual clutter along almost all of the arterial streets, but especially along S. 108th Street (see Figure 4).
- The existing "double" light poles located in the medians in the W. Janesville Road and W. Forest Home Avenue rights-of-way create a sense of visual clutter, appear to visually divide the arterial highway in half rather than conveying a sense of wholeness, and increase the potential for traffic accidents since these poles are located in the vehicular "recovery" area of the medians (see Figure 5).
- There is little attractive landscaping, such as street trees and raised median plantings, along the arterial street rights-of-way concerned (see Figure 6). This contributes to the lack of character and aesthetic appeal of the Corridor study area. The existing landscape medians in the south portion of the W. Forest Home Avenue right-of-way also add to the unattractiveness of the Corridor study area, since these medians contain unappealing guardrails and gravel shoulders that spread into the grass area and which contribute to the lack of the clearly defined paving edge which would be provided by concrete curbing (see Figure 7).
- Most of the existing freestanding commercial signs adjacent to the arterial streets concerned provide little or no landscaping at the base of the sign to enhance its aesthetic appeal and visibility from the public streets. In addition, the Village's existing "Welcome" signs are not highly visible from the public streets because of their location and the size of the lettering. No such signs are provided at the corporate limits, where they could be seen by traffic entering the Village from the City of Franklin on S. 108th Street or W. Forest Home Avenue.

- A large number of parking lots serving five or more vehicles (see Map 15) lack adequate landscaping and are not well marked, thus creating an unattractive and unsafe "sea of asphalt." Potential landscape elements include few or no landscape islands with plantings in the interior of parking lots (see Figure 8); insufficient landscape screening to screen parking lots from adjacent residential districts and from public streets (see Figure 9); and lack of curbing and, on some sites, permanent paving. In addition, the number of parking spaces and the width of traffic aisles provided for individual land uses is inadequate in some cases, in others, 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 and vehicular traffic conflicts. Too many parking spaces with excessively wide traffic aisles are an inefficient use of lands and project an image of a "sea of asphalt" that could otherwise be converted to attractive landscaped areas.

An examination of parking needs and traffic aisle dimensions for individual land uses, which is beyond the scope of this study, should be undertaken by the Village to determine precisely where and to what extent changes are required.

- A significant number of commercial and multi-family building elevations (see Map 15) visible from public streets and adjacent to customer and tenant parking lots provide no or insufficient building foundation landscaping consisting of adequate decorative mulch, grass, flowers, shrubs, or trees to complement and enhance the aesthetic appeal of the building as well as of the site.
- A number of existing buildings contain incompatible building features that do not complement the neighboring buildings, thus creating an ununified and unattractive urban design setting. Examples of basic building elements that distract from the image and character of the Village are noncomplementary colors, discordant materials, and unnecessary large building face signs (see Figure 10). An individual inven-



DETAILED VISUAL AND URBAN DESIGN ANALYSIS OF THE VILLAGE  
OF HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA: 1989

LEGEND

- HIGH- AND LOW-INTENSITY ELECTRIC TRANSMISSION LINES AND SUPPORTING STRUCTURES THAT CREATE A SENSE OF VISUAL CLUTTER
- PAIRED LIGHT POLES THAT CREATE A SENSE OF VISUAL CLUTTER AND APPEAR TO DIVIDE THE ARTERIAL HIGHWAY IN HALF RATHER THAN CONVEY A SENSE OF WHOLENESS
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GENERAL COMMENTS

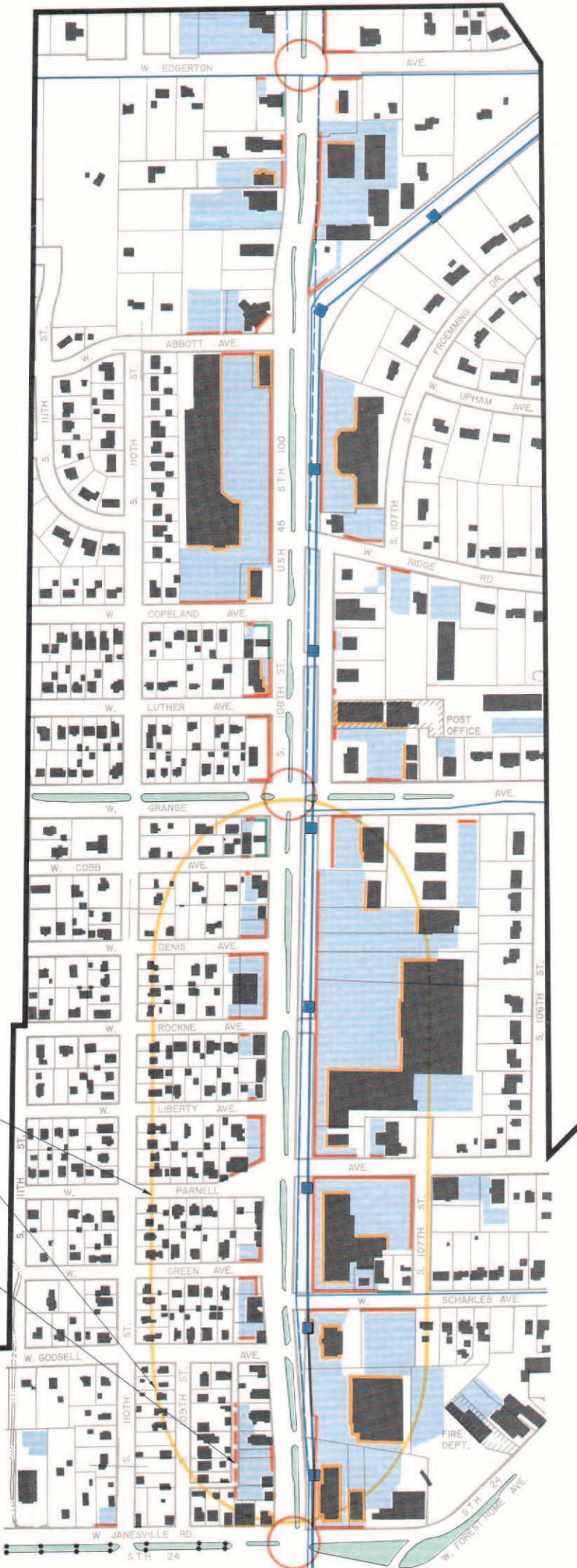
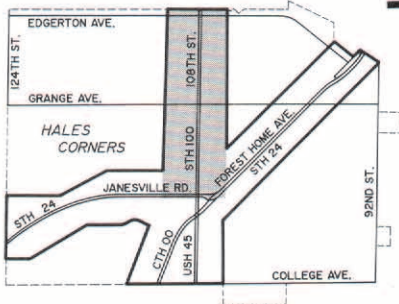
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ASYMMETRICAL URBAN MASS ALONG ARTERIAL SIGNIFICANTLY REDUCES VISUAL UNITY OF THE CORRIDOR

DOUBLE FRONTAGE LOTS USE LAND INEFFICIENTLY

LACK OF SCREENING BETWEEN COMMERCIAL PARKING AREA AND RESIDENTIAL LOTS

LOCATION MAP





DETAILED VISUAL AND URBAN DESIGN ANALYSIS OF THE VILLAGE  
OF HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA: 1989

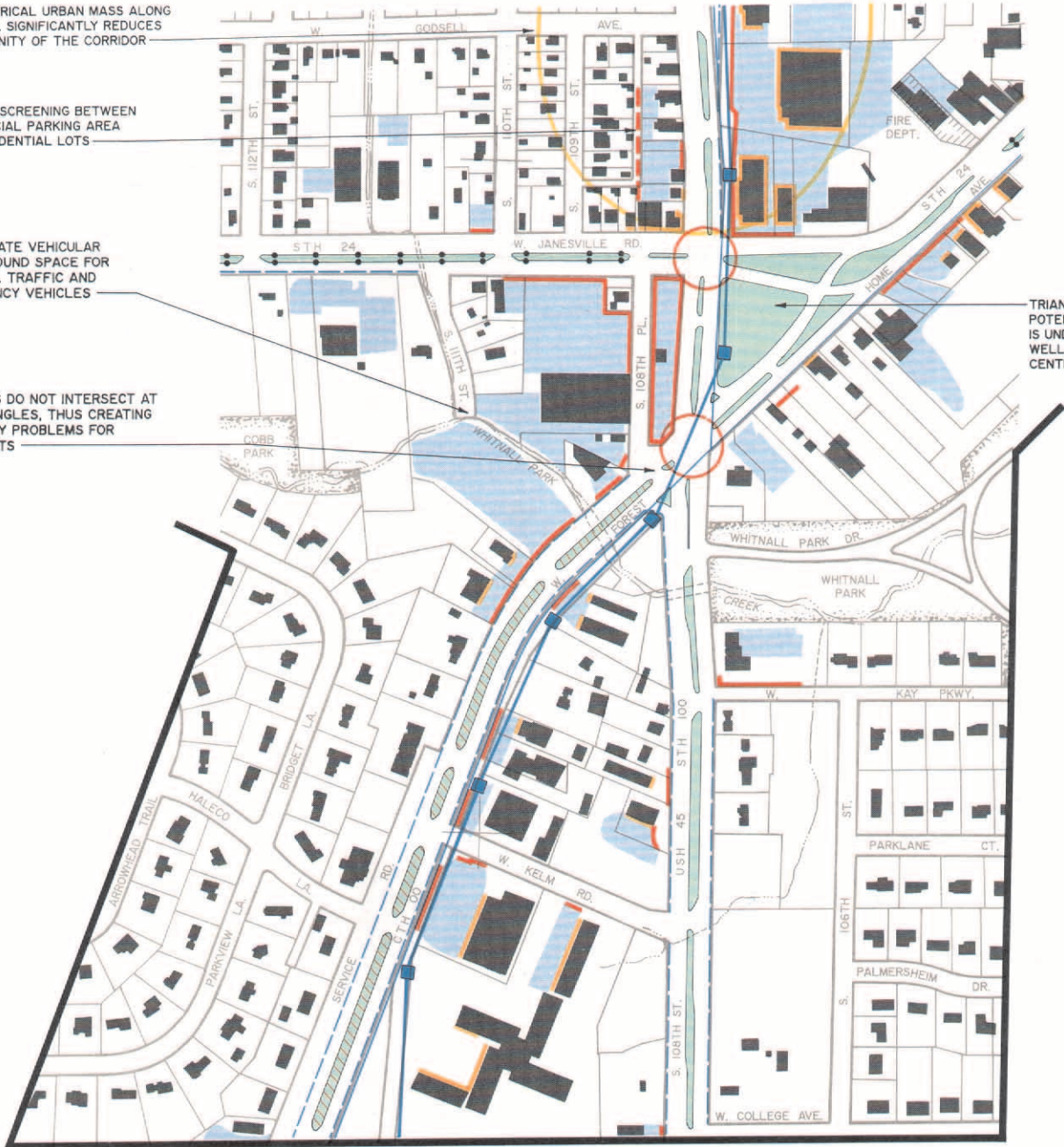
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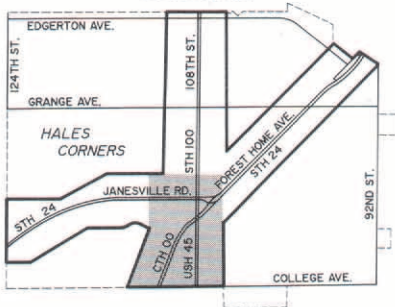
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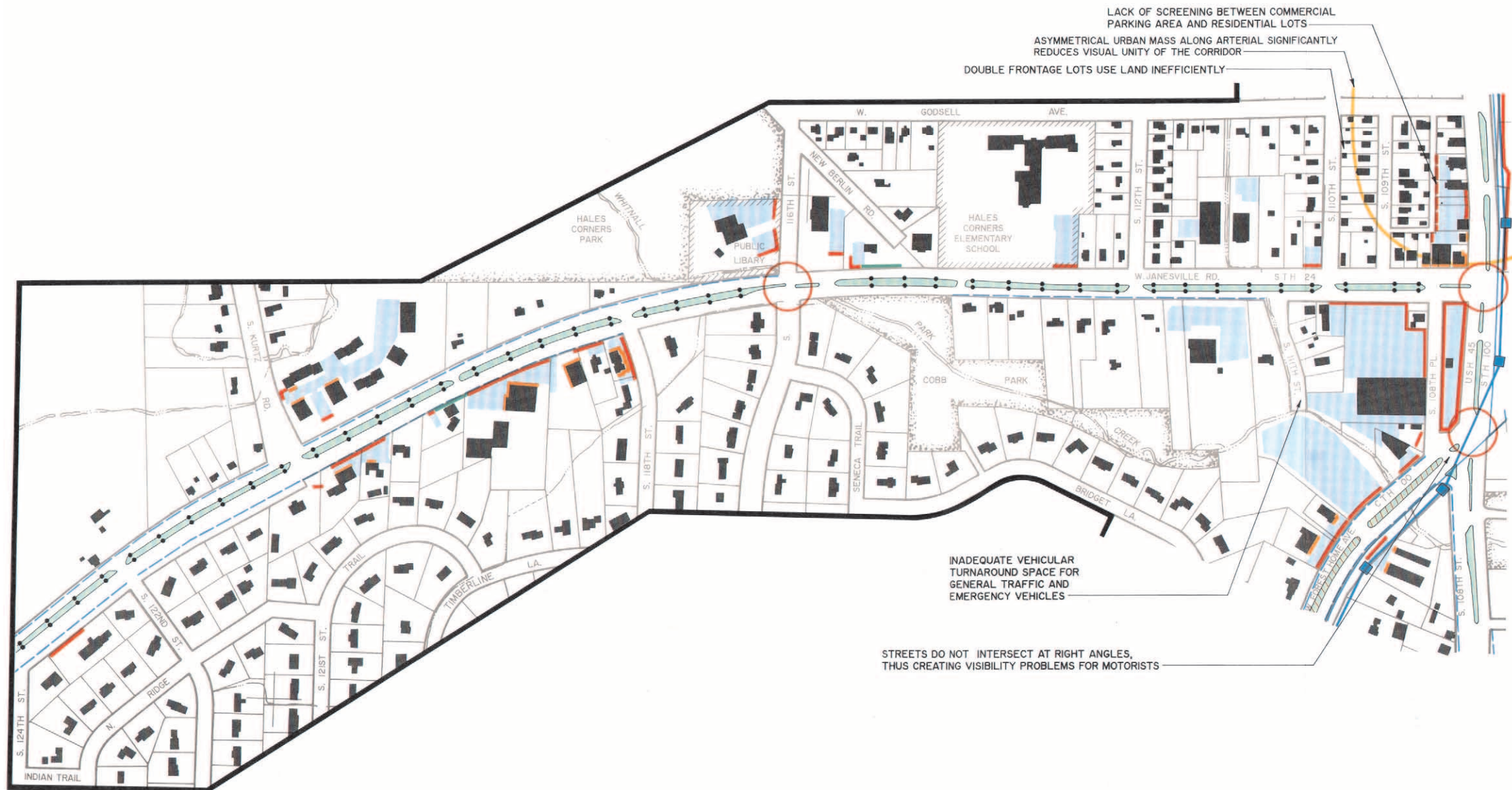
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LOCATION MAP





DETAILED VISUAL AND URBAN DESIGN ANALYSIS OF THE VILLAGE  
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LACK OF SCREENING BETWEEN COMMERCIAL  
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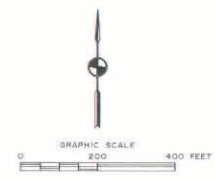
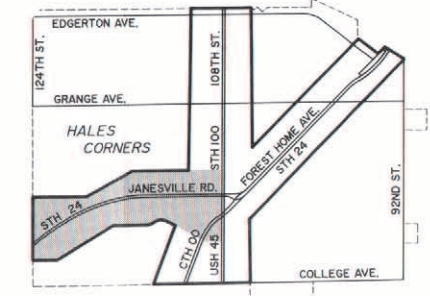
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LOCATION MAP





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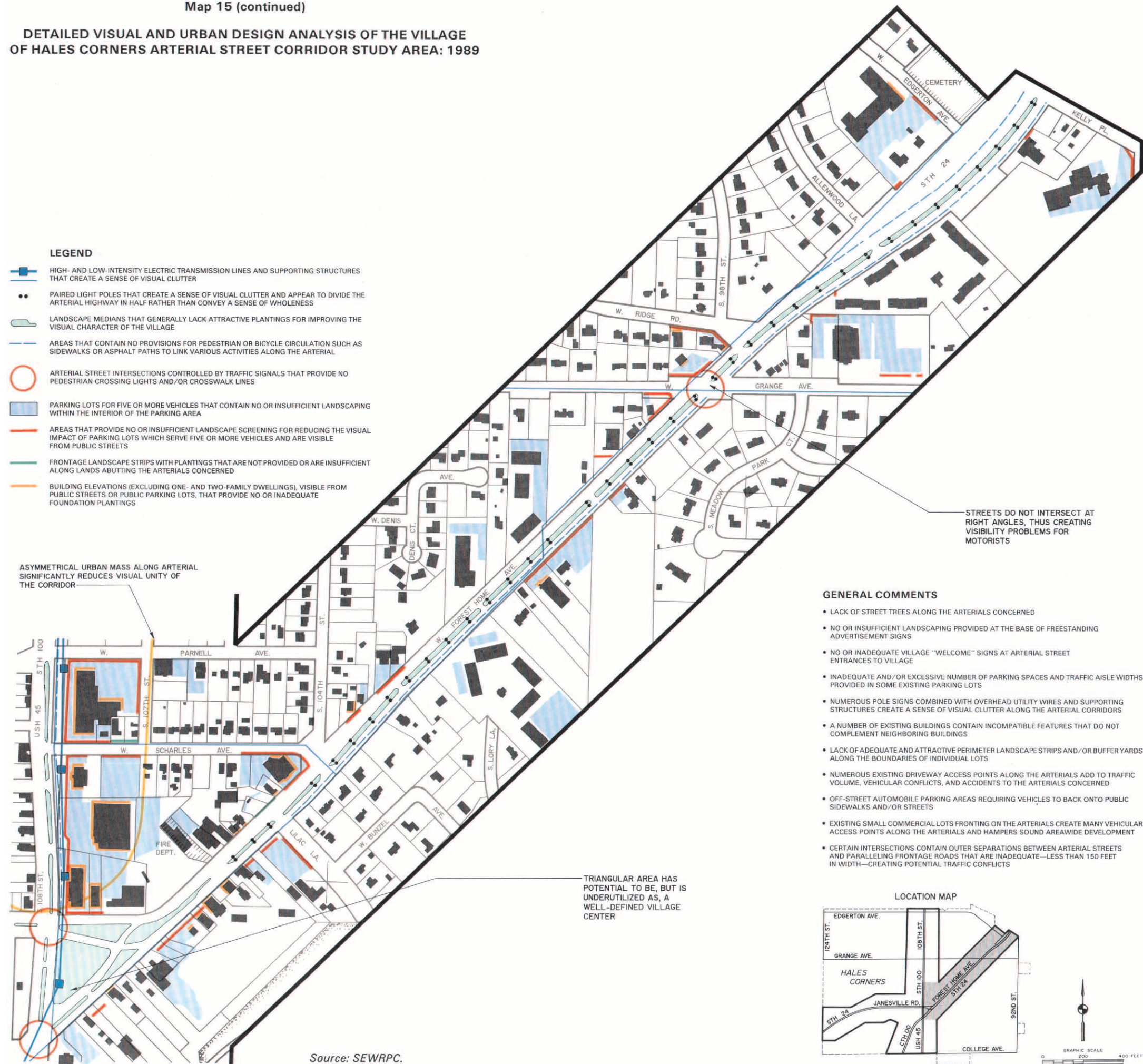


Figure 4

**VISUAL CLUTTER CAUSED BY  
EXISTING SIGNS, TOWERS, POLES, AND  
OVERHEAD WIRES ALONG S. 108TH STREET**



*Source: Photograph by Robert S. McGonigal.*

Figure 7

**LACK OF CLEARLY DEFINED AND  
ATTRACTIVE LANDSCAPE MEDIANS IN  
THE W. FOREST HOME AVENUE RIGHT-OF-WAY**



*Source: Photograph by Robert S. McGonigal.*

Figure 5

**VISUAL CLUTTER CAUSED BY "DOUBLE  
LIGHT POLES" IN LANDSCAPE MEDIANS  
IN W. FOREST HOME AVENUE RIGHT-OF-WAY**



*Source: Photograph by Robert S. McGonigal.*

Figure 8

**LACK OF INTERIOR PARKING LOT LANDSCAPING**



*Source: Photograph by Robert S. McGonigal.*

Figure 6

**MINIMAL ATTRACTIVE LANDSCAPING  
PROVIDED ALONG S. 108TH STREET**



*Source: Photograph by Robert S. McGonigal.*

Figure 9

**LACK OF LANDSCAPING FOR BUFFERING  
PARKING LOTS FROM PUBLIC VIEW**



*Source: Photograph by Robert S. McGonigal.*



Figure 10

#### NONCOMPLEMENTARY BUILDING FEATURES



Source: Photograph by Richard R. Kania.

Figure 11

#### UNSAFE PARKING AREAS BACKING ONTO PUBLIC STREET AND LACK OF PERIMETER LANDSCAPE STRIPS



Source: Photograph by Richard R. Kania.

tory and analysis of every building located along the arterial streets concerned is beyond the scope of this study. An attempt was made, however, to identify and resolve basic problems of the architecture of buildings by establishing general design criteria for guiding the Village Building Board in examining each building development or redevelopment to determine its compatibility with its surrounding environment, yet allowing flexibility for creative architectural and landscape design.

- Adequate and attractive perimeter landscape strips or buffer yards with plantings along the boundaries of many individual sites are either not provided or are insufficient. In some cases, perimeter landscape strips are not provided where entrances are not well-defined and where vehicles back

out of parking lots onto public sidewalks or streets (see Figure 11). Perimeter landscape strips are not necessary if adjoining sites share entrances, traffic aisles, and parking lots at the lot line.

- The existence of many driveway access points along these arterial streets and the land access streets intersecting the west side of S. 108th Street, as shown on Map 15, adds to the traffic volume on the arterials, adds to the potential for traffic conflicts and accidents, and decreases the traffic capacity of the streets concerned.
- The streets in the intersections of W. Grange Avenue and W. Forest Home Avenue and S. 108th Street intersect at less than right angles, thus creating visibility problems for motorists at those intersections, even though traffic signals are provided at these intersections to help abate this problem.
- The intersection of S. 108th Place with W. Janesville Road and W. Forest Home Avenue is located too close to two major intersections, where W. Janesville Road and W. Forest Home Avenue, respectively, intersect with S. 108th Street. This increases the potential for traffic conflicts in these locations. This type of problem also exists near the intersections of W. Janesville Road and S. 122nd Street, Halego Lane and W. Forest Home Avenue, Allenwood Lane and W. Forest Home Avenue, Ridge Road and S. 108th Street, and W. Grange Avenue and S. 108th Street, where the outer separation between the arterial streets and paralleling frontage roads near these intersections are inadequate, less than 150 feet in width.
- The intersection of S. New Berlin Road, S. 116th Street, and W. Godsell Avenue consist of three streets converging at one intersection, a dangerous traffic pattern.
- The dead-end segment of S. 111th Street south of W. Janesville Road does not provide adequate vehicular turnaround space for general traffic and emergency vehicles.
- Several arterial street intersections controlled by traffic signals, shown on Map 15, provide inadequate pedestrian crossing measures, lacking pedestrian crossing lights and/or crosswalk paving lines.



- The arterial street Corridors are primarily automobile-oriented, and there are few or no provisions for pedestrian or bicycle circulation to link the various activities along the arterials, as identified in Map 15.
- There are excessively deep narrow lots, small lots, and angular lots fronting on the arterials, all of which make future development and redevelopment along these arterials difficult, ensure that there will continue to be a large number of individual driveway access points along the arterial, create inefficient development of lands, and, in the case of angular lots, create a vision of unbalanced urban mass along the arterial since buildings on angular lots would not be aligned parallel to the arterial right-of-way. The existence of double-frontage, or "through," lots between S. 109th Street and S. 110th Street and north of W. Janesville Road is an inefficient use of land, since streets front both the rear and the front of lots.

#### Corridor Study Area Assets

The visual character of the Village Corridor study area also has some positive attributes. The heavily traveled arterials suggest that there is a high potential for the community to present a positive image to the passerby. Since these arterial streets, especially S. 108th Street, are envisioned as the "main streets" of the Village, with certain important land uses located along them, an effort should be made to change the highway strip commercial image, with the accompanying negative perceptions of the com-

munity, to one which conveys a more positive image of the Village. Improvements to existing visual elements, such as increasing landscape planting and creating an identifiable "Village Center" or a major landmark, can be used to help structure a more pleasant environment. Visual landmarks are defined as physical elements which have a very clear visual form, contrast with their visual background, and have a prominence of spatial location. A unique opportunity exist to capitalize on several visual landmarks in the Village "triangular area," where the three arterials intersect each other, to create an identifiable "Village Center." By utilizing the large landscaped island in the center of the triangular area combined with other landmarks such as the church and bank located at the southeast and northwest corners, respectively, of the intersection of W. Janesville Road and W. Forest Home Avenue, a distinctively recognizable "Village Center" could be created. Landmarks such as these and existing historic buildings, combined with attractive and well maintained land uses, are important elements for structuring the visual character of the Village, and play a significant role in establishing both a sense of place and also community identity.

With prudent planning and effective plan implementation, many of the identified problems can be corrected and the positive characteristics enhanced. Opportunities can be found in the careful organization, or clustering, of similar land uses along the arterial streets, the enhancement of existing activity nodes, the limitation of vehicular access along the arterials, and proper landscaping and beautification of the area.

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## Chapter III

# DEVELOPMENT OBJECTIVES, PRINCIPLES, STANDARDS, AND RELATED URBAN DESIGN CRITERIA

### INTRODUCTION

Planning is a rational process for formulating and meeting objectives. Therefore, the formulation of objectives is an essential task which must be undertaken before the preparation of plans can be undertaken. Accordingly, recommended land use and transportation system development objectives together with supporting principles, standards, and related urban design criteria were formulated for the Hales Corners Corridor study area. The objectives were formulated in consideration of the problems and issues identified in Chapter II of this report and of objectives contained in regional plans which were considered applicable to, and supportable by, the Village. The development objectives relate primarily to the distribution of the various land uses within the study area and to the provision of essential facilities and services to those land uses. Supporting urban design criteria were also formulated for use in the development of the urban design elements of the plan.

### BASIC CONCEPTS AND DEFINITIONS

The terms "objective," "principle," "standard," "design criteria," "plan," "policy," and "program" are subject to a range of interpretations. For the purposes of this planning effort, these terms are defined 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. Design criteria: A body of information which can be applied to the development of a solution or solutions to a specific design problem or set of problems.
5. Plan: A design which seeks to achieve agreed-upon objectives.
6. Policy: A rule or course of action followed 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 five of these terms, an understanding of their interrelationship and the concepts they represent is essential to an understanding of the development objectives, principles, standards, and related urban design criteria presented herein. The development objectives, principles, and standards, as developed and approved by the Village Plan Commission, deal primarily with 1) the spatial distribution of land uses, 2) the preservation of environmental corridors, 3) the provision of recreational opportunities, 4) the provision of safe and efficient transportation facilities, and 5) the preservation of historic sites and structures. These objective, together with their supporting principles and standards, follow.

### OBJECTIVES, PRINCIPLES, AND STANDARDS

#### OBJECTIVE NO. 1—LAND USE SPATIAL DISTRIBUTION

A spatial distribution of the various land uses which will result in a compatible arrangement of land uses properly related to the supporting transportation, utility, and public facility systems, assuring the economical provision of these supporting facilities as well as enhancing the economic base of the Village of Hales Corners.

#### PRINCIPLE

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

Table 16

**FACILITY SITE AREA AND SERVICE RADIUS STANDARDS  
FOR THE VILLAGE OF HALES CORNERS CORRIDOR STUDY AREA**

Type	Number of Persons Served	Required Site Area (gross acres)	Maximum One-Way Walking Distance Medium-Density Neighborhood (miles)	Maximum One-Way Travel Time (minutes)	
				Automobile at 25 mph	Transit Facility (total elapsed time)
Commercial Facilities					
Neighborhood Retail and Service Center .....	4,000-10,000	5-15	1.00 <sup>a</sup>	3	--
Community Retail and Service Center .....	10,001-75,000	15-60	1.50 <sup>a</sup>	5	8
Highway-Oriented Commercial Development ....	15,000 <sup>b</sup>	5-25	--	10	--
Community Office Development .....	1,000 minimum employees	20 minimum	--	10	30
Community Industrial Facility ....	300-3,500 employees	20-320	--	10	30
Local Transit Facilities .....	--	--	0.25	--	--
Outdoor Recreational Facilities					
Neighborhood .....	6,500	11 <sup>c</sup>	0.75 <sup>a</sup>	--	--
Community .....	--	25-99	2.00 <sup>a</sup> (urban)	20	--
Multi-Community .....	--	100-249	4.00 <sup>a</sup> (urban)	--	--
	--	--	10.00 <sup>a</sup> (rural)	--	--
Regional .....	--	250 or more	10.00 <sup>a</sup>	--	--

<sup>a</sup> Minimum facility service radius (not walking distance).

<sup>b</sup> Indicates minimum average weekday traffic volume required on abutting freeway or arterial street or highway.

<sup>c</sup> Neighborhood park sites not associated with a school site should have a minimum area of 16 acres per park site.

Source: SEWRPC.

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. Sites for commercial, industrial, educational, transportation, and recreational facilities to serve the neighborhood and community should be provided in accordance with the standards set forth in Table 16.
2. Urban residential uses should be located in planned areas which are provided with centralized public sanitary sewerage and water supply facilities and contain, within a reasonable walking distance, necessary supporting local service uses, such as parks, commercial, and elementary school facilities. These uses should have reasonable access through the appropriate component of the transportation system to employment, community and regional commercial, cultural, and governmental centers and to secondary schools and higher educational facilities.
3. Neighborhood and community-level commercial uses should be located in established centers of concentrated retail and service activity and should be afforded access to the arterial street system. Sites for neighborhood and community service facilities should be provided in accordance with the service radius standards set forth in Table 16.
4. General industrial uses should be located in planned industrial districts so as to have access to arterial street and highway facilities and reasonable access through an appropriate component of the transportation system to residential areas. They should not be intermixed with commercial, residential, governmental, recreational, school, or institutional uses. In addition, industrial uses should be provided adequate water supply, public sanitary sewer, stormwater drainage facilities, and adequate power supply, including natural gas and electricity.



## **OBJECTIVE NO. 2—ENVIRONMENTAL CORRIDOR PRESERVATION**

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 and to maintain social and economic well-being. Preservation of one of the most significant aspects of the natural resource base, environmental corridors, contributes to the maintenance of the ecological balance, natural beauty, and economic well-being of the study area.

### **PRINCIPLE**

The primary and secondary environmental corridors 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.

### **STANDARD**

All remaining undeveloped lands within the designated primary and secondary environmental corridors in the Hales Corners study area should be preserved in essentially natural, open uses.

## **OBJECTIVE NO. 3—RECREATION**

The provision of an integrated system of public general-use outdoor recreation sites and related open-space areas which will allow the resident population of the area and of the Region adequate opportunity to participate in a wide range of outdoor recreation activities.

### **PRINCIPLE**

Public general-use outdoor recreation sites promote the maintenance of proper physical and mental health by providing both 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, and opportunities to participate in such less athletic activities as pleasure walking, picnicking, or just resting and reflecting. Such recreational pursuits 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. A well-designed system of recreation corridors offered as an integral part of linear open-space lands also can serve to connect physically 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, of outdoor recreation facilities provided at existing public park sites, and of existing recreation trail-type facilities.
2. The maximum travel distance to recreation corridors should be five miles in urban areas.
3. A minimum of 0.16 linear mile of recreation-related open space consisting of linear recreation corridors should be provided for each 1,000 persons in the Region, including the Village of Hales Corners. No minimum area, length, or width are required for creating linear recreation corridors.

## **OBJECTIVE NO. 4—TRANSPORTATION SYSTEM**

An integrated transportation system, which through its location, capacity, and design will effectively serve the existing and proposed land use pattern and promote the implementation of the plan, meeting the anticipated 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 within communities, counties, and the Region, thereby providing the attribute of accessibility essential to the support of these activities.

## STANDARDS

1. The transportation system should provide access not only to all land presently devoted to urban use but also to land proposed for such use. Vehicular and pedestrian conflicts should be avoided where possible and, where conflicts cannot be totally avoided, they should be minimized.
2. The transportation system should be comprised of an orderly functional hierarchy of arterials, collectors, land access streets, and pedestrian paths configured to meet the transportation and land use needs of the study area. All streets and highways in the Hales Corners Corridor study area should be placed into one of the following functional classifications:

Land Access Streets: The primary function of land access streets is to conduct traffic to and from individual building sites.

Collector Streets: The primary function of collector streets is to collect traffic from urban uses abutting minor land access streets and convey it to arterial streets and/or activity centers.

Arterial Streets: The primary function of arterial streets is to provide for the expeditious movement of through traffic into, out of, and within the community. Arterial streets should be located to minimize the penetration of existing and proposed residential areas.

3. Streets and highways in the Hales Corners Corridor study area should be improved to cross-sections similar to the Village's preferred cross-sections shown in Figure 12, as related to functional classification.
4. Transportation-related facilities, such as off-street parking and off-street truck loading, should be located in proximity to the principal land uses to which they are accessory.

## OBJECTIVE NO. 5—HISTORIC PRESERVATION

The preservation of the historical heritage of the Village of Hales Corners.

## PRINCIPLE

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

## STANDARDS

The standards promulgated by the U. S. Secretary of Interior for historic preservation projects should be used to preserve significant historic features in the Village. In general, these standards govern all forms of historic preservation treatments, including acquisition, protection, stabilization, preservation, rehabilitation, restoration, and reconstruction. The following apply to all treatments undertaken on designated historic properties in Hales Corners.

1. Every reasonable effort should be made to provide for a property a compatible use that requires minimal alteration of the building, structure, or site, and its environment or to use a property for its originally intended purpose.
2. 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 material or distinctive architectural features should be avoided whenever possible.
3. All buildings, structures, and sites should be recognized as products of their own time. This should be considered before alterations which have no historical basis and which seek to create an earlier appearance are undertaken.

4. 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.
5. Distinctive stylistic features or examples of skilled craftsmanship which characterize a building, structure, or site should be treated with sensitivity.
6. Deteriorated architectural features should be repaired, wherever possible. In the event replacement is necessary, the new material should match the material 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.
7. The surficial cleaning of structures should be undertaken with the gentlest means possible. Sandblasting and other cleaning methods that will damage the historic building materials should not be undertaken.
8. 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 physical development intent of the Village of Hales Corners Corridor study area. The standards perform a particularly important function in land use plan design since they form the basis upon which estimates of future community land use needs are based.

## URBAN DESIGN CRITERIA

In order to develop physical solutions to urban design problems identified in Chapter II, certain urban design criteria must be agreed upon. Urban design criteria can be defined as a body of information which can be applied to the development of a solution or solutions to a specific urban design problem or set of problems. Specific urban design decisions should be based, in part, on urban design criteria, as well as on the underlying objectives, principles, and standards outlined above. Urban design criteria are intentionally specific in order to assist in the development of detailed urban design solutions to defined problems. Urban design criteria have been developed for the study area with respect to site planning design, architectural design, and sign design in the Corridor. These criteria should be used by Hales Corners officials to assist in the evaluation of general urban design proposals and their attendant site and building plans.

## CORRIDOR URBAN DESIGN AND SITE PLANNING DESIGN CRITERIA

### Streets

**Street Cross-Sections:** Street cross-sectional design criteria for arterial streets, collector

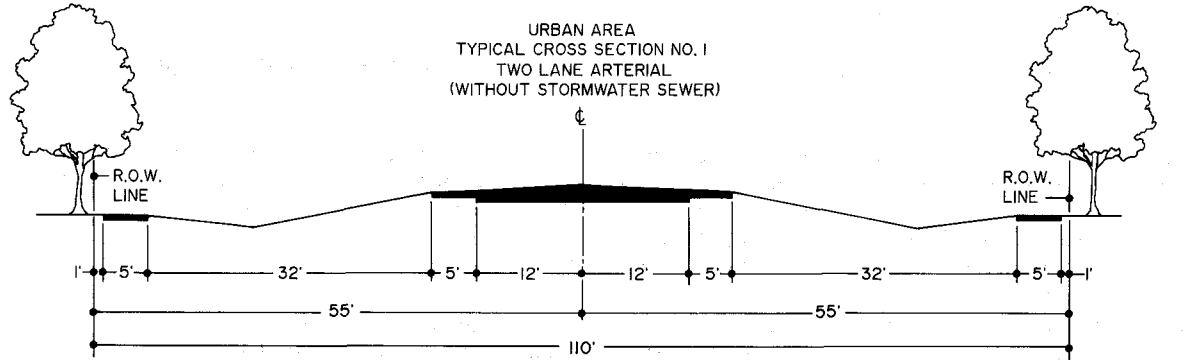
streets, land access streets, cul-de-sac streets, and pedestrian ways are shown graphically in Figure 12.

**Street Intersections:** Streets should intersect each other at as nearly right angles 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 degree. In addition, the number of streets converging at one intersection should be held to a minimum, preferably to not more than two streets at one intersection, the number of intersections along arterial streets and highways should be held to a minimum, and the distance between intersections should generally not be less than 1,200 feet. Minor street or land access street openings onto arterial streets should be minimized to improve traffic flow and reduce traffic hazard.

Property lines at street intersections should be rounded, with a minimum radius of 15 feet or greater, depending on the curb return radii of the adjoining intersection; preferably, they should be cut off by a straight line through the points of tangency of an arc with 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 15 feet, preferably 25 feet. The minimum turning radii for various design vehicles are illustrated in Figure 13.

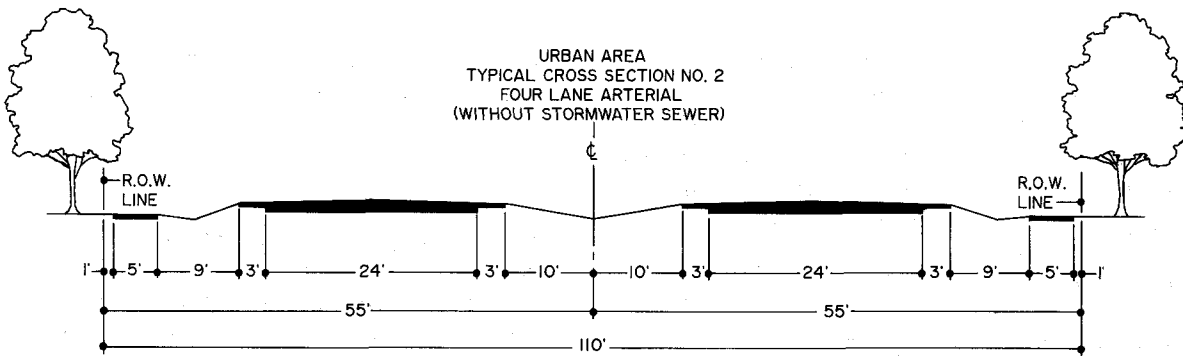
Figure 12

**TYPICAL CROSS-SECTIONS FOR STREETS AND HIGHWAYS  
IN THE VILLAGE OF HALES CORNERS CORRIDOR STUDY AREA<sup>a</sup>**



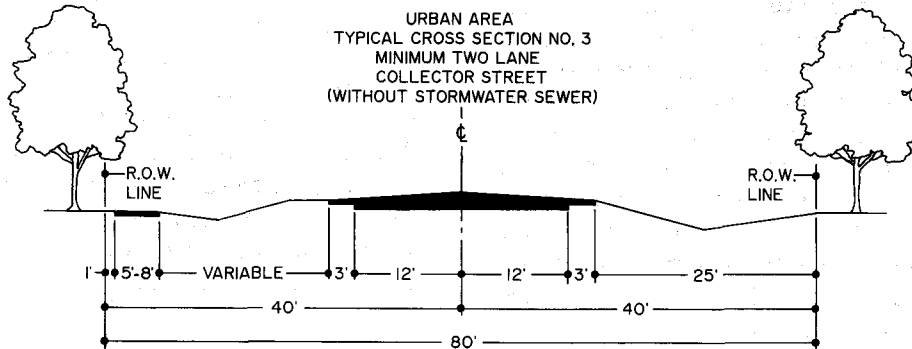
GRAVEL BASE VARIES  
24' HIGH TYPE PAVEMENT, 110' R.O.W.  
SIDEWALKS

CAPACITY RANGE:  
UNDER DESIGN CAPACITY LESS THAN 11,700 VEH./DAY  
AT DESIGN CAPACITY 11,700-13,000 VEH./DAY  
OVER DESIGN CAPACITY GREATER THAN 13,000 VEH./DAY

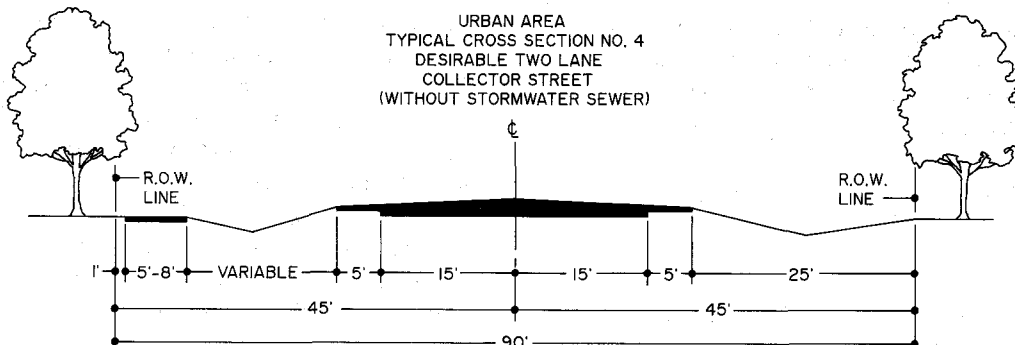


GRAVEL BASE VARIES  
DUAL 24' HIGH TYPE PAVEMENT, 110' R.O.W.  
SIDEWALKS

CAPACITY RANGE:  
UNDER DESIGN CAPACITY LESS THAN 15,300 VEH./DAY  
AT DESIGN CAPACITY 15,300-17,000 VEH./DAY  
OVER DESIGN CAPACITY GREATER THAN 17,000 VEH./DAY



GRAVEL BASE VARIES  
24' HIGH TYPE PAVEMENT, 80' R.O.W.  
SIDEWALK



GRAVEL BASE VARIES  
30' HIGH TYPE PAVEMENT, 90' R.O.W.  
SIDEWALK

NOTE: THIS CROSS-SECTION SHOWS A WIDER PAVEMENT WIDTH THAN THE AFOREFERENCED CROSS-SECTION NO. 1 FOR TWO-LANE ARTERIAL STREETS MAINLY BECAUSE THE VILLAGE ALLOWS PARKING ALONG SUCH COLLECTOR STREETS, LOCATED PRIMARILY IN RESIDENTIAL AREAS, WHILE PARKING IS NOT PERMITTED ALONG TWO-LANE ARTERIAL STREETS CONSTRUCTED IN ACCORDANCE WITH CROSS-SECTION NO. 1.



Figure 12 (continued)

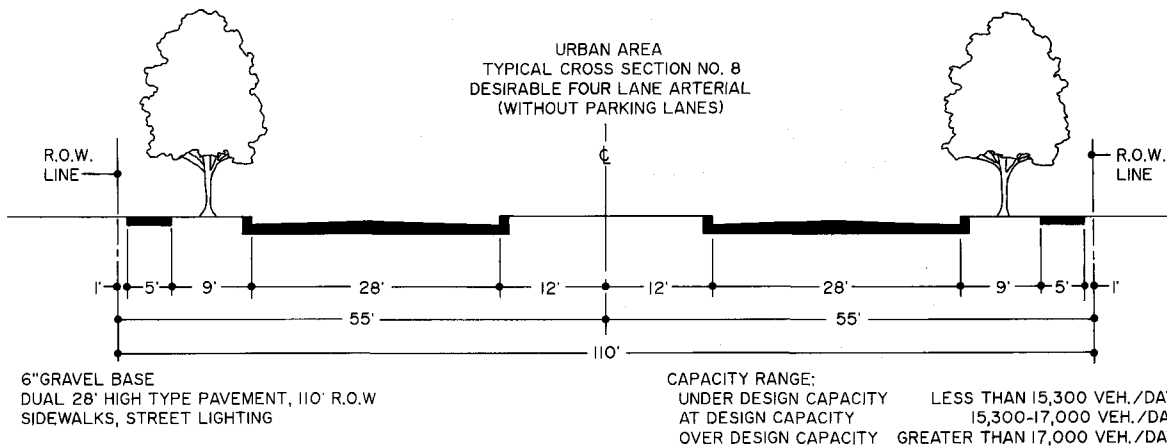
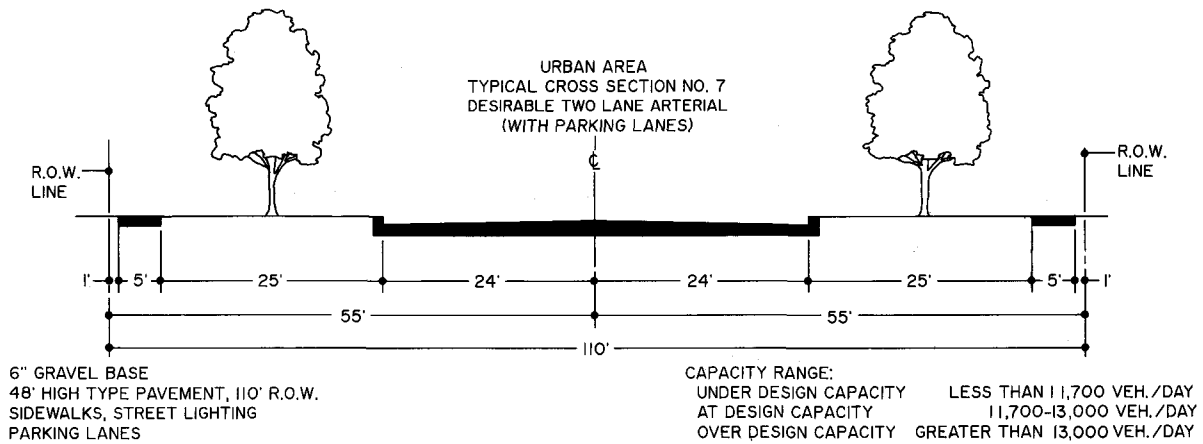
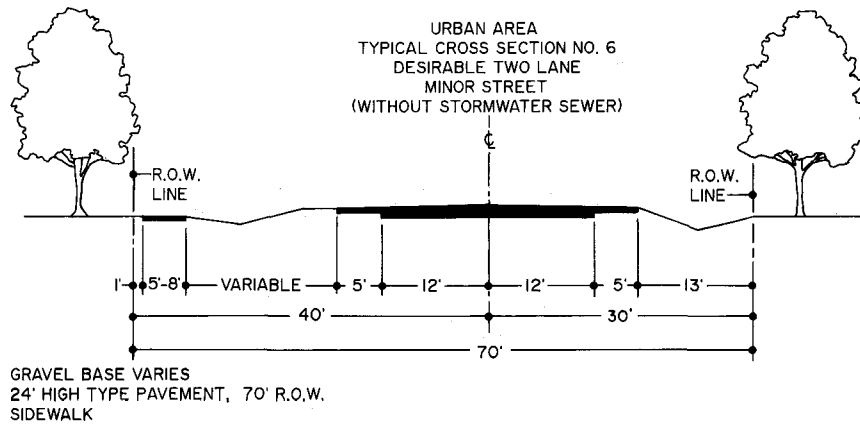
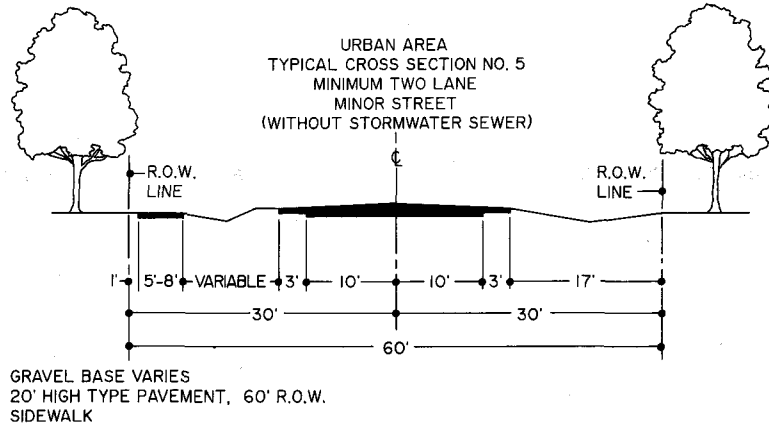


Figure 12 (continued)

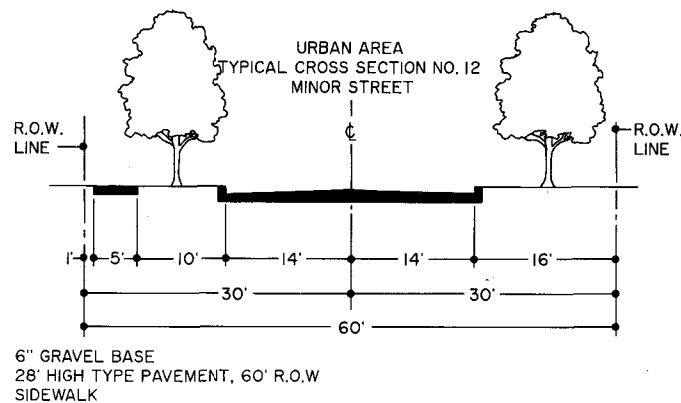
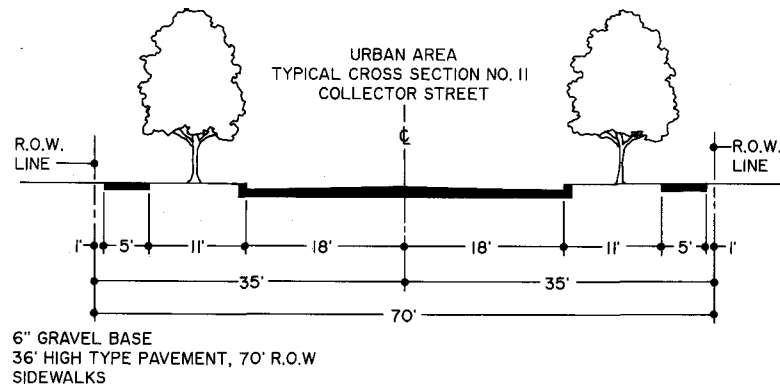
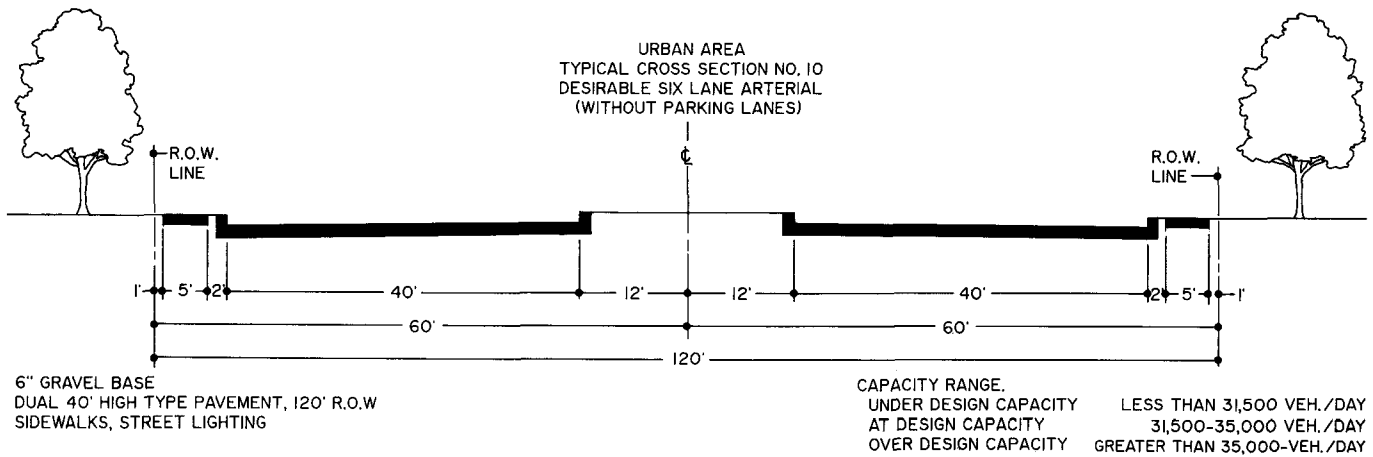
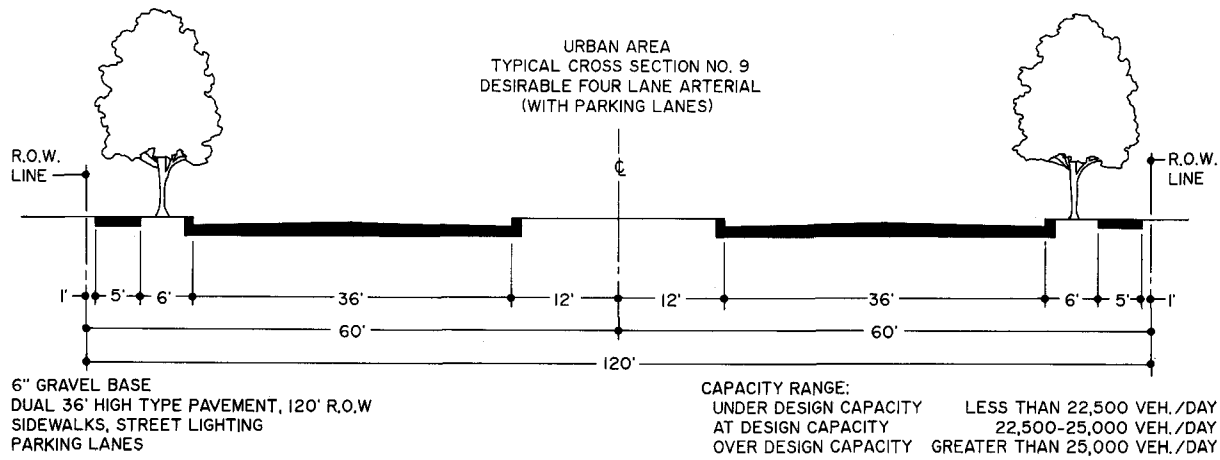
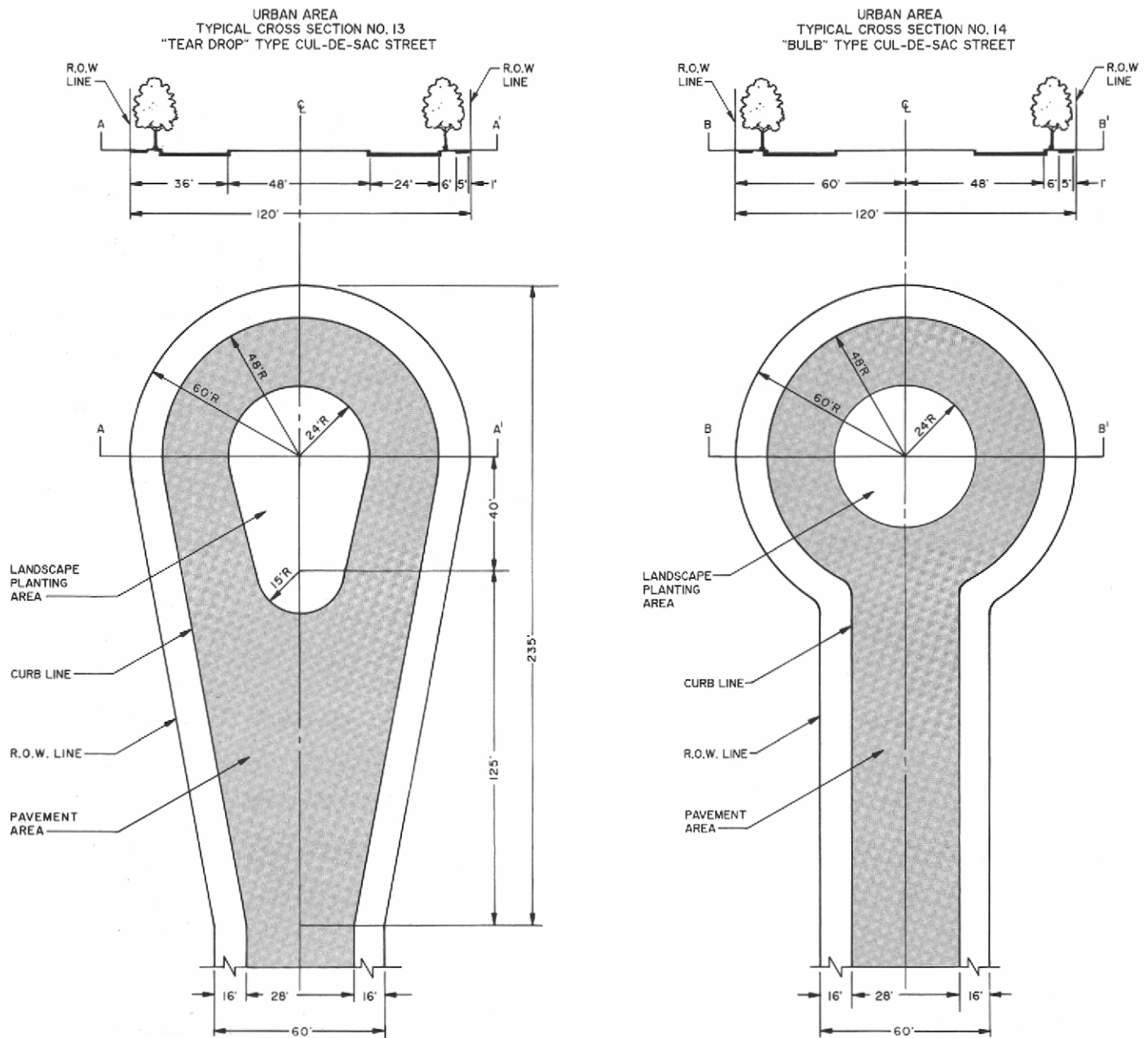


Figure 12 (continued)



<sup>a</sup>The recommended street cross-section for an eight-lane arterial is shown in Chapter V, Figure 8, for a portion of S. 108th Street (USH 45 and STH 100). The Village of Hales Corners referenced preferred cross-sections are, in all cases, typical, and are subject to variations with regard to a number of considerations, including topography, vehicular and pedestrian traffic patterns and volumes, parking lane widths, right-of-way widths, and relation to adjacent land uses, such variations appropriately being the subject of further consideration under subsequent preliminary engineering studies. 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 which should be considered for reservation to accommodate the required number of traffic lanes, and of what pavement widths are being suggested as a point of departure for the preliminary engineering studies.

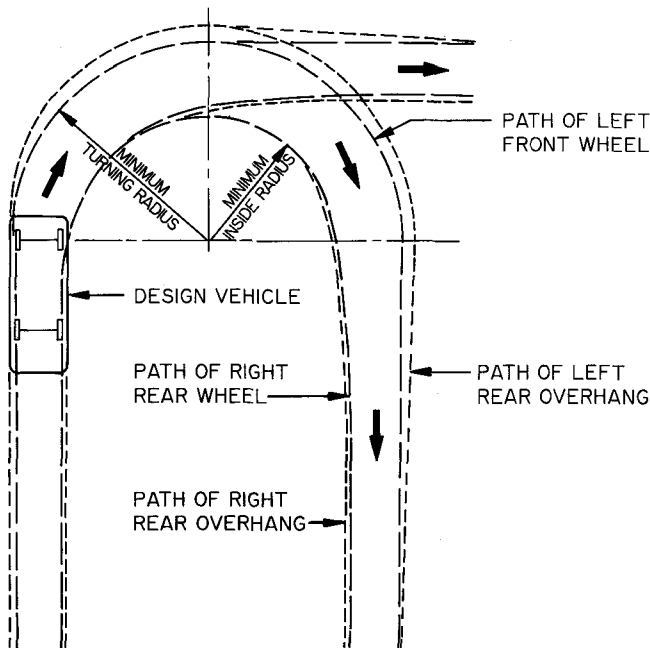
Source: Village of Hales Corners and SEWRPC.

**Street Alignment:** 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.

Minor and collector streets should not necessarily continue across arterial streets. If the distance between the centerline intersections of any street and any intersecting arterial street is less than 250 feet, measured along the centerline of the intersecting streets, or less than 125 feet, measured along the centerline of other intersecting streets, then the street location should be adjusted so that the distance is increased or the

Figure 13

## MINIMUM TURNING RADII OF VARIOUS DESIGN VEHICLES



Source: American Association of State Highway and Transportation Officials and SEWRPC.

connection across the intersecting street is continuous in alignment, thus avoiding a jog in the flow of traffic.

**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 wide, between arterial streets and paralleling frontage roads, except at intersections, are acceptable where frontage road traffic is very light, 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 much preferred to two-way. One-way operation inconveniences local traffic to some degree, but the advantages in reduction in vehicular and pedestrian conflicts at intersecting streets often fully compensate from this inconvenience. In addition, there is some saving in pavement and right-of-way width.

**Handicapped and Bicycle Access:** Wheelchair and bicycle curb ramps should be installed at street intersection crosswalks, pursuant to Section 66.616 of the Wisconsin Statutes.

Design Vehicle Type	Passenger Car	Single-Unit Truck	Single-Unit Bus	Articulated Bus	Semitrailer Intermediate
Symbol . . . . .	P	SU	BUS	A-BUS	WB-40
Minimum Turning Radius (feet) . . . . .	24.0	42.0	42.0	38.0	40.0
Minimum Inside Radius (feet) . . . . .	15.3	28.4	23.2	21.0	19.9

Design Vehicle Type	Semitrailer Combination Large	Semitrailer Full-Trailer Combination	Motor Home	Passenger Car with Travel Trailer	Passenger Car with Boat and Trailer
Symbol . . . . .	WB-60	WB-60	MH	P/T	P/B
Minimum Turning Radius (feet) . . . . .	45.0	45.0	42.0	24.0	24.0
Minimum Inside Radius (feet) . . . . .	19.8	22.5	28.4	5.5	10.0

### Vehicular Access

**Access and Street Intersections:** Driveways on corner lots should be far enough 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 in the study area should be a minimum of 115 to 230 feet, or, preferably, 250 feet, where land parcel size permits, as shown in Chapter V, Figure 48. 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:** Access barriers such as curbing, fencing, landscaping, or other topographic barriers should be erected to prevent undesirable vehicular traffic from or 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 provided as barriers, the width of the landscaped area should be adequate to accommodate the size of the berms, based on their slope, height, and form. When structural barriers are used, the minimum width could be five feet with landscaping such as trees and shrubs provided between the structure and adjacent right-of-way. Figure 14 illustrates alternative landscaping for an access barrier with parking lot screening.



**Reversed-Frontage Lots to Limit Arterial Street and Highway Access:** Whenever proposed residential land uses abut an arterial street or highway, the character of the residential uses and the capacity and safety of the arterial facility should be protected by limiting access from the abutting land uses and by separating through and local traffic, where possible, as shown in Figure 15. In addition, a minimum 20-foot-wide planting screen should be provided in a nonaccess reservation along the rear property line, as shown in Figure 16.

**Looped Land Access Streets:** Looped land access streets in commercial areas should be used when feasible in order to assist reducing the potential number of driveway intersections, along an arterial, as illustrated in Figure 17.

**Commercial Driveway Alignment and Shared-Use:** Land access driveways in commercial areas should intersect each other at as nearly right angles 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 18 to assist in reducing the number of driveways needed and in limiting the confusion caused by unaligned driveways. Also, the use of shared driveways and parking lots in commercial areas, as shown in Figure 18, should be promoted. In such cases, the driveway centerline may be the property line between two parcels of land or a mutually agreed-upon land access easement.

**Driveway Design for Entering Vehicles:** Driveway design in commercial areas should allow an entering vehicle a turning speed of 15 miles per hour in order to assist in reducing interference with through arterial street traffic. Driveway design and placement should be in harmony 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 weekday peak traffic period.

**Driveway Spacing:** Driveway spacing should be determined as a function of arterial street and highway operating speeds. The minimum spacing between access driveways along an arterial street or highway should be determined according to Table 17. 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, along arterial streets and highways, where abutting street frontage is less than 400 feet, a maximum of one driveway opening should be permitted to a particular site 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 may be permitted. When a shared driveway is used, it should be considered as one single direct-access driveway.

#### **Traffic Visibility**

**Sight Distance:** Direct-access driveways abutting arterial streets and highways should be located where an exiting vehicle has a minimum unobstructed sight distance according to Table 18, based upon the operating design speed of the abutting arterial street or highway.

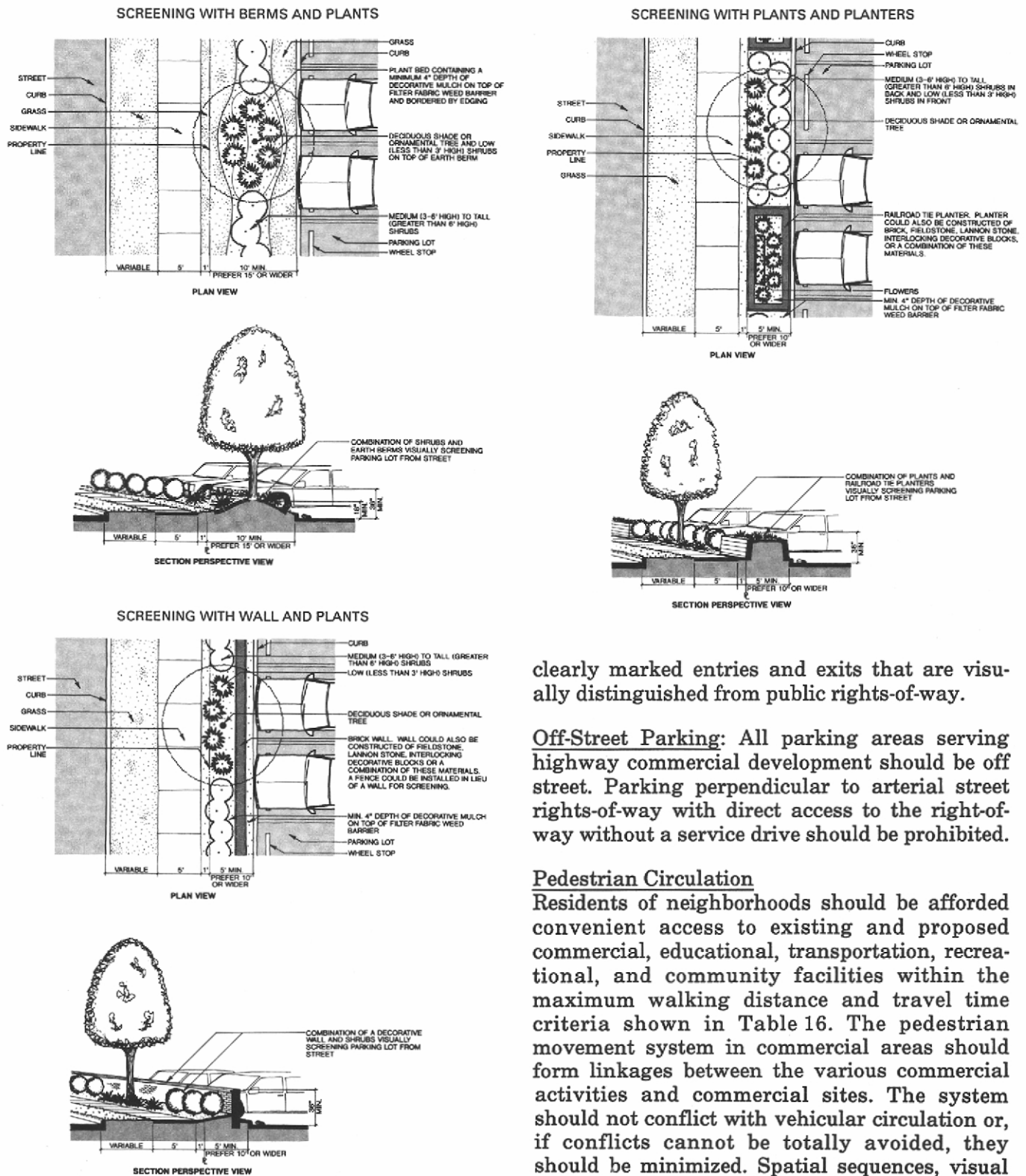
**Street Visibility Triangle:** A vision triangle clearance space, or visibility triangle, should be provided in which minimal obstructions, such as structures, parking, or vegetation, are allowed between the heights of 2.5 feet and 10 feet above the mean street curb grade adjacent to the triangular space formed by any two existing or proposed intersecting street or alley right-of-way lines and a line formed by joining points on such lines, located a minimum of 15 feet from their intersection, as shown in Figure 19. In the case of an arterial street intersecting another arterial street, the corner cutoff distances establishing the vision triangle clearance space should be increased to 50 feet, as shown in Figure 19. Trees and freestanding signs may be permitted within the visibility triangle, provided the bottom of the tree canopy and the sign face are at least 10 feet above the mean street curb grade adjacent to the triangular space.

**Driveway Visibility Triangle:** Where private driveways intersect streets, a visibility triangle should be provided whose one side is a 10-foot line at a right angle inward from the street right-of-way line, whose other side is a 10-foot tangent of the street right-of-way line away from the driveway, and which two lines are connected by the hypotenuse of said right angle to form the visibility triangle.

**Arterial Street, Commercial Parking Lot Access**  
**Parking Visibility from Arterial Streets:** Commercial parking lots should be partially visible from an arterial street or highway and have

Figure 14

# ALTERNATIVE LANDSCAPING FOR HIGHWAY ACCESS BARRIERS WITH PARKING LOT SCREENING



Source: SEWRPC.

clearly marked entries and exits that are visually distinguished from public rights-of-way.

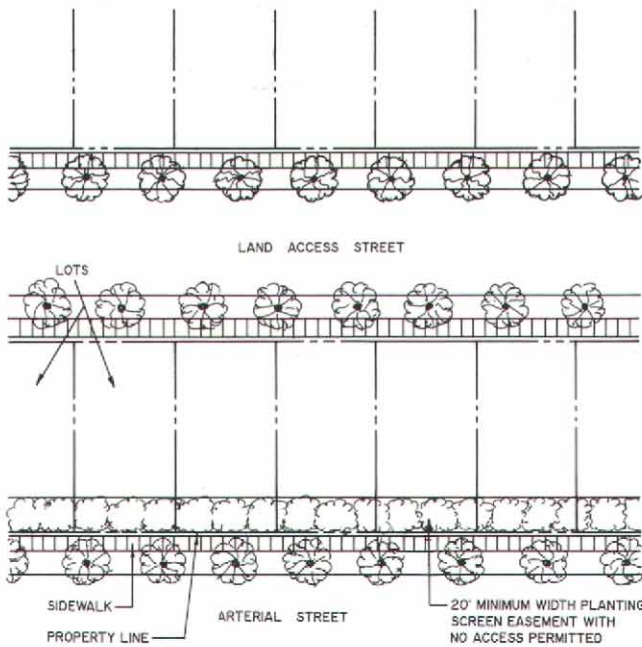
**Off-Street Parking:** All parking areas serving highway commercial development should be off street. Parking perpendicular to arterial street rights-of-way with direct access to the right-of-way without a service drive should be prohibited.

## Pedestrian Circulation

Residents of neighborhoods should be afforded convenient access to existing and proposed commercial, educational, transportation, recreational, and community facilities within the maximum walking distance and travel time criteria shown in Table 16. The pedestrian movement system in commercial areas should form linkages between the various commercial activities and commercial sites. The system should not conflict with vehicular circulation or, if conflicts cannot be totally avoided, they should be minimized. Spatial sequences, visual aspects, and pavement texture should also be taken into consideration in the placement of

Figure 15

**LIMITATION OF VEHICULAR ACCESS TO ARTERIAL STREETS AND FOR REVERSE-FRONTAGE LOTS**



Source: SEWRPC.

sidewalks, so that the pedestrian is offered a variety of visually pleasing experiences to add to his overall enjoyment of the commercial area. A recommended minimum sidewalk width is five feet. Provisions for the handicapped should also be made in sidewalk construction, pursuant to Section 66.616 of the Wisconsin Statutes. In highway commercial areas, where there are activities on both sides of the arterial, a pedestrian path system should be provided on each side of the street. A pedestrian crossing of the arterial should be provided at a signalized intersection where pedestrian traffic exists.

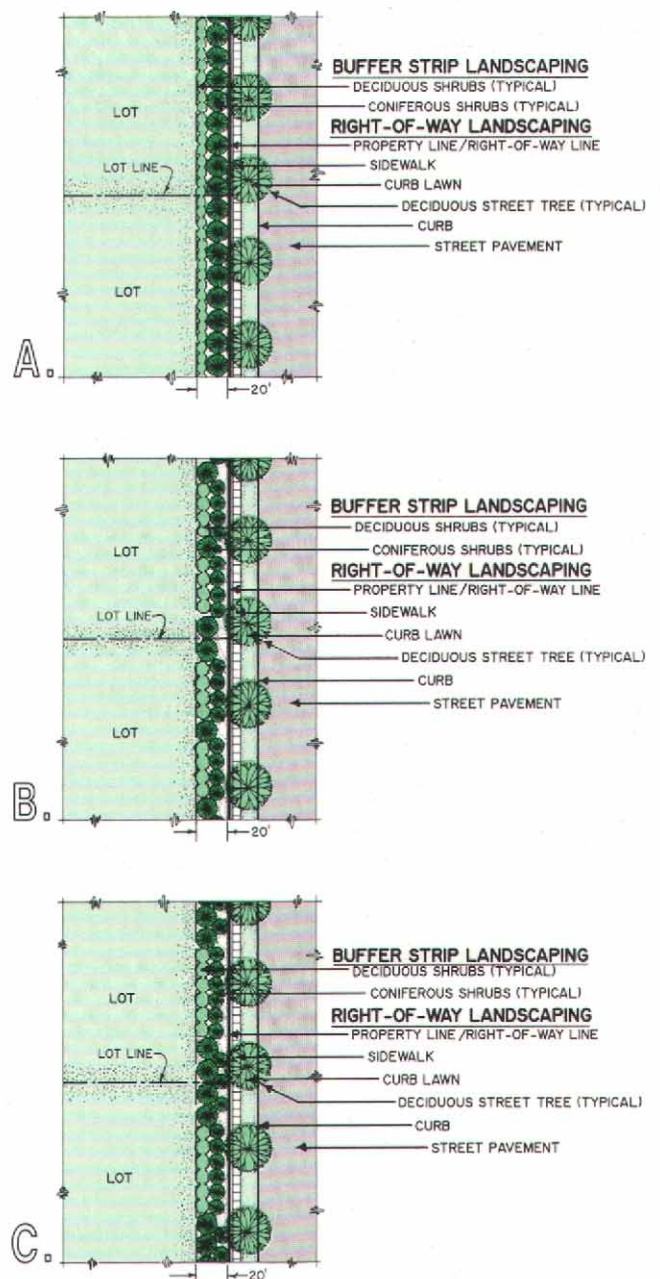
**Pedestrian Ways:** Pedestrian ways not less than 10 feet wide may be required near the center and entirely across any block of more than 900 feet in length to provide adequate pedestrian circulation or access to schools, parks, shopping centers, churches, or transportation facilities.

**Commercial Land Use Spatial Consideration**

**Commercial Business Clustering:** Businesses with similar characteristics should form commercial clusters and locate within proximity of one another in order to better define identifiable commercial areas for the user, provide functional

Figure 16

**MINIMUM ALTERNATIVE LANDSCAPE PLANTING FOR PLANTING SCREENS<sup>a</sup>**



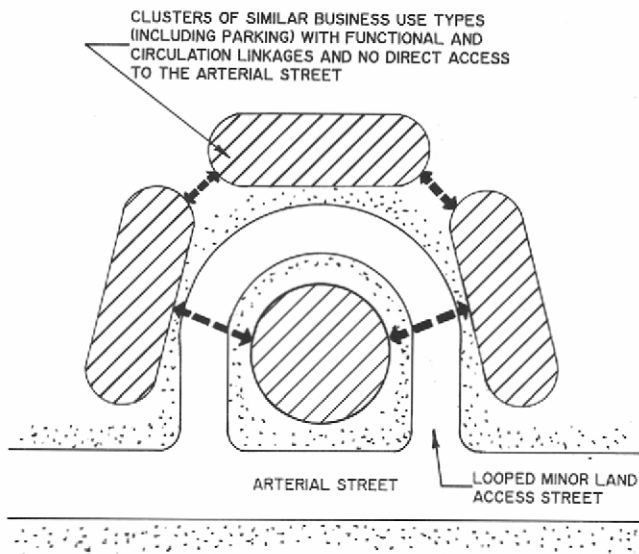
<sup>a</sup>Earth berms may also be placed in the easement. Sidewalks and street trees shown are optional.

Source: SEWRPC.

linkages of similar business types, reduce distances, and provide circulation linkages for both vehicular and pedestrian traffic as illustrated in Figure 20. Businesses may be so located forming the following three general types of clusters:

Figure 17

### DESIRABLE LOOPING OF LAND ACCESS STREETS IN COMMERCIAL AREAS



Source: SEWRPC.

Table 17

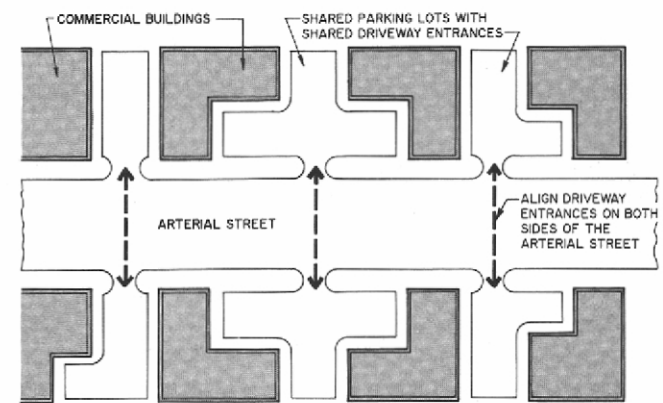
### HIGHWAY OPERATING SPEED AND MINIMUM SPACING BETWEEN DIRECT-ACCESS DRIVEWAYS

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 18

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



Source: SEWRPC.

Table 18

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

Highway Design Speed (mph)	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, 1984; and the Wisconsin Department of Transportation *Facilities Development Manual*.

1. Shopping center retail sales and services clusters are characterized by onsite parking for customer automobiles and a pedestrianized shopping environment. Uses in this category would include general merchandise stores, food stores, apparel and accessory stores, drugstores, department stores, gift shops, personal services, banks/savings and loan institutions, and restaurants (not drive-in or drive-through).

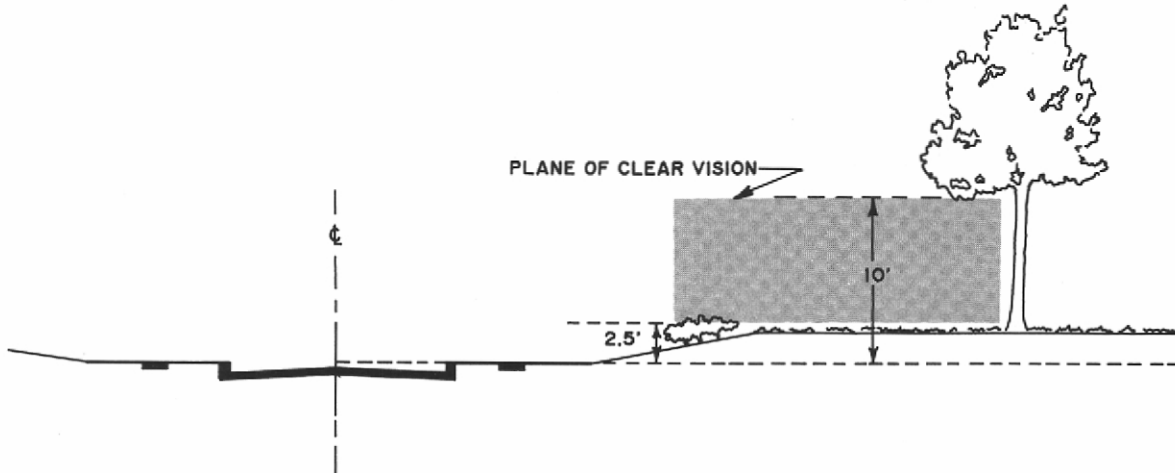
2. Automobile-oriented retail sales and services clusters are characterized by sales and services to commercial customers in the automobile. These types of commercial uses are not pedestrian-oriented on the site. Uses in this category include gasoline stations, automobile sales/services, bowling alleys,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



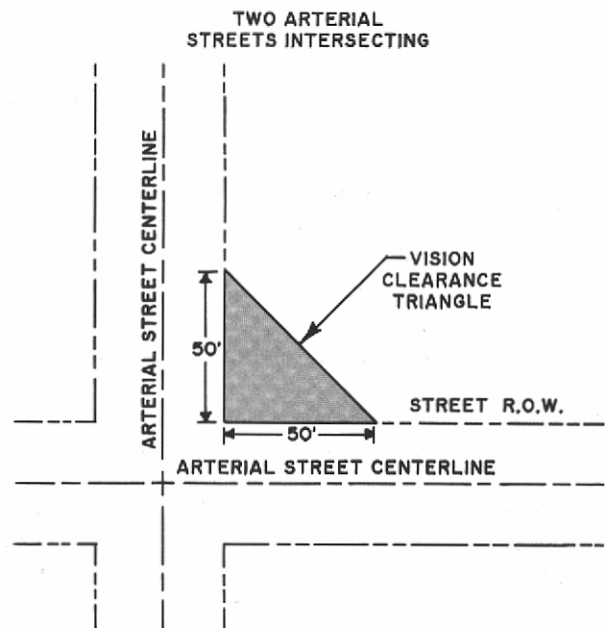
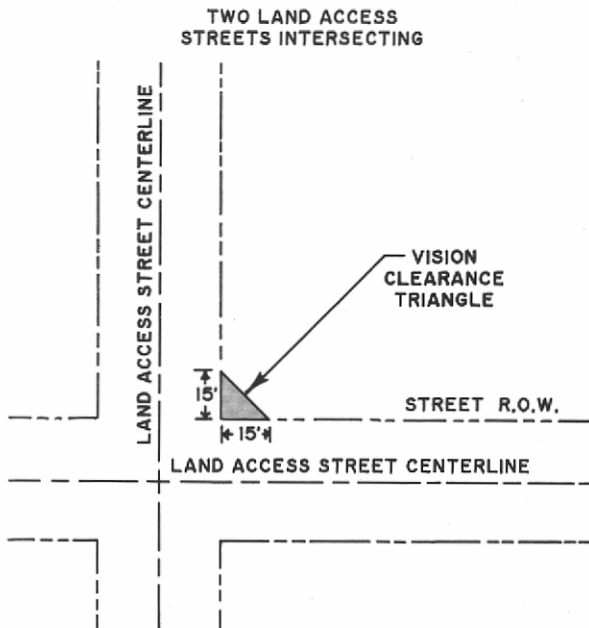
Figure 19

VISIBILITY TRIANGLE: SECTION AND PLAN VIEWS

VISION CLEARANCE TRIANGLE  
(CROSS-SECTIONAL VIEW)



VISION CLEARANCE TRIANGLE  
(PLAN VIEWS)



Source: SEWRPC.

3. Office clusters include professional offices, medical offices, dental offices, and clinics.

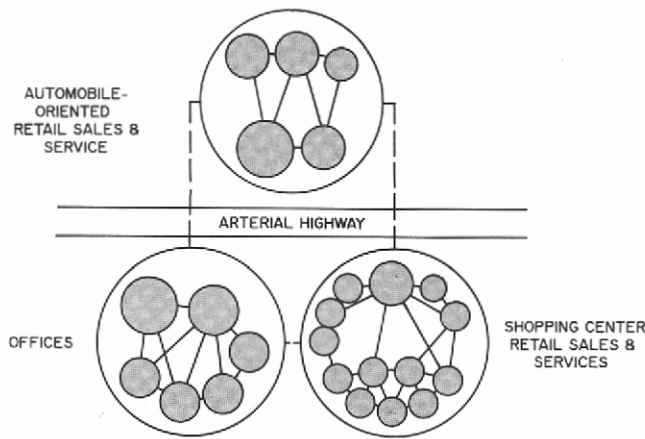
**Minimum Commercial Lot Sizes:** Minimum lot sizes in certain designated commercial areas along arterial streets and highways should be one acre, with a minimum frontage of 150 feet.

Commercial lot sizes should meet at least the minimum requirements for lot size specified by a community's zoning ordinance.

**Land Use Buffers:** Commercial land uses should be buffered from adjacent noncompatible land uses, such as residential, industrial, and institu-

Figure 20

### CONCEPTUAL SKETCH OF CLUSTERED COMMERCIAL AREAS ALONG AN ARTERIAL HIGHWAY



NOTE: CLUSTERS OF SIMILAR BUSINESS USE TYPES WITH FUNCTIONAL AND CIRCULATION LINKAGES

Source: SEWRPC.

tional land uses, by either natural means or man-made means such as berming, plantings, fencing, or walls.

#### Commercial Site Internal Circulation

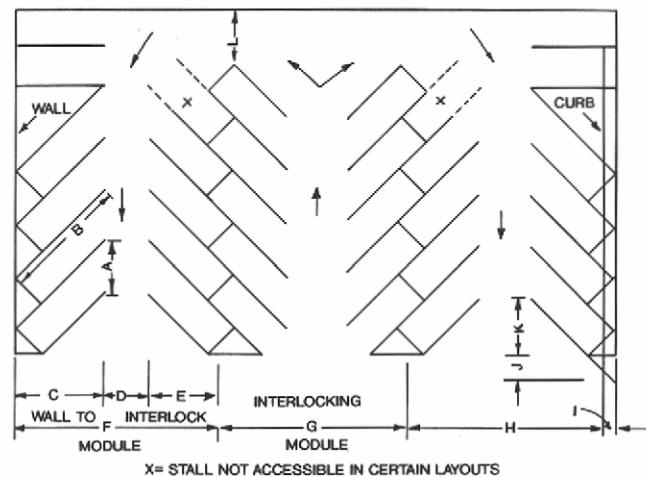
**Vehicular Circulation between Adjacent Properties:** Provision for circulation between adjacent commercial uses should be provided through coordinated land access drives and/or jointly used parking lots, as shown in Figure 18.

**Onsite Vehicular Circulation:** The vehicular circulation system within and around separate parcels of land should be so developed as to provide easy access to parking facilities from the larger community without destroying the safety or capacity of arterials. 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 exit 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, queuing area to accommodate a minimum of 10 vehicles onsite should be provided.

Figure 21

### MINIMUM DESIGN DIMENSIONS FOR COMMERCIAL PARKING LOTS



PARKING LAYOUT DIMENSIONS (IN FEET) FOR 9-FT STALLS AT VARIOUS ANGLES

DIMENSION	ON DIAGRAM	45°	60°	75°	90°
STALL WIDTH, PARALLEL TO AISLE	A	12.7	10.4	9.3	9.0
STALL LENGTH OF LINE	B	25.0	22.0	20.0	18.5
STALL DEPTH TO WALL	C	17.5	19.0	19.5	18.5
AISLE WIDTH BETWEEN STALL LINES	D	12.0	16.0	23.0	26.0
STALL DEPTH, INTERLOCK	E	15.3	17.5	18.8	18.5
MODULE, WALL TO INTERLOCK	F	44.8	52.5	61.3	63.0
MODULE, INTERLOCKING	G	42.6	51.0	61.0	63.0
MODULE, INTERLOCK TO CURB FACE	H	42.8	50.2	58.8	60.5
BUMPER OVERHANG (TYPICAL)	I	2.0	2.3	2.5	2.5
OFFSET	J	6.3	2.7	0.5	0.0
SETBACK	K	11.0	8.3	5.0	0.0
CROSS AISLE, ONE-WAY	L	14.0	14.0	14.0	14.0
CROSS AISLE, TWO-WAY	-	24.0	24.0	24.0	24.0

Source: American Association of State Highway and Transportation Officials and SEWRPC.

#### Onsite Parking Areas and Traffic Aisles

**Parking Lot Dimensions:** Minimum design dimensions for commercial parking lots are shown in Figure 21.

**Traffic Aisle Dimensions:** Onsite traffic aisles, except those within common parking areas, 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, hard-surfaced so as to be dust-free, and properly drained. Any parking area 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.

**Number of Parking Spaces:** Parking spaces should be provided in sufficient number to meet the requirements of the Village Zoning Code. Parking spaces shall be provided for those stalls assigned for the use of the physically handicapped, pursuant to Section 346.503 of the Wisconsin Statutes.

**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 and 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 in commercial areas should serve four purposes: it should 1) provide for the safe movement of pedestrian and vehicular traffic, 2) aid in the provision of an environment which promotes security and crime prevention, 3) aid in creating an aesthetically pleasing environment at night-time, as well as during the day, and 4) assist in promoting the use of the commercial facilities both day and night.

Recommended illumination for commercial parking areas should be about 1.0 footcandle.<sup>1</sup> All other outside side lighting should be arranged and shielded to prevent glare or reflection, nuisance, inconvenience, or hazardous interference of any kind to adjoining streets or residential properties.

**Parking Lot Location:** Parking lots should be so located on the site as to minimize walking distances to the facility the parking lot is serving.

#### **Onsite Service and Loading Areas**

Service and loading areas should be sited for

<sup>1</sup>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 designed 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, alleys, and roadway lighting layouts.

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 public view and the customers in the area.

#### **Landscaping**

**Areas of Existing Vegetation:** Every effort should be made to protect and retain existing trees, shrubbery, vines, and grasses not actually growing in public roadways, drainageways, paths, or trails. Trees should be protected and preserved during construction in accordance with sound conservation practices, including the preservation of trees by the use of wells, islands, or retaining walls whenever abutting grades are altered to the extent that an existing tree could be damaged or destroyed. Soil compaction and stockpiling of soil or construction materials in tree root zones should be prevented.

**Urban Landscape Plant Selection:** Landscape plantings enhance the overall aesthetics of a community and also contribute to the general welfare of the public. Landscape plantings have functional as well as aesthetic characteristics which would improve a commercial area to a great extent. Plantings of trees and shrubs can provide shade and shelter, act as limited noise buffers and visual screens, assist in the channeling of 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 22.

**General Parking Lot Landscaping:** The interior of off-street parking areas for five vehicles or more should be provided with evenly distributed accessory landscape areas totaling not less than 5 percent of the total surfaced parking area. The minimum size of each landscape area should be 135 square feet and nine feet in width or length. Trees should be provided at the rate of one deciduous tree for every 10 parking spaces, to be located in the landscaped areas provided within the parking lot. Location of landscape areas, plant materials, protection afforded the plantings, including curbing and provision for maintenance should be considered. Landscaping similar to that in Figure 23 should be provided in parking lots.

**Parking Lot Landscaped Islands:** At the end of each parking bay, or row of spaces, a landscaped island at least nine feet in width and 15 feet in length should be provided to separate the bays from each other or from traffic lanes. The end of double-row parking spaces should contain landscaped islands at least nine feet in width and 30 feet in length. A parking bay should not be constructed with a length of more than 200 feet without providing a landscaped island contiguous to said parking bay. The design dimensions of landscaped islands may vary from the aforementioned dimensions in order 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 as a result of such design changes.

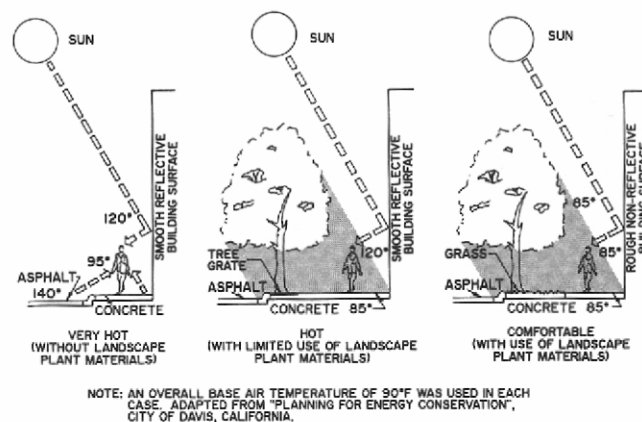
**Parking Lot Screening:** Parking areas for five or more vehicles and loading/unloading service areas, if adjoining a residential use, should be screened from such residential uses by a solid wall, fence, berm, dense evergreen planting, or other effective means, constructed and maintained at a minimum height of 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 berms or in planters, provided the combined height is at least three feet after three years. Figure 14 illustrates alternative landscape screenings for parking lots.

If berms are used as a screen, the berm should have a minimum height of 1.5 feet and a crown of at least four feet wide, with side slopes no greater than four to one (4:1). The berms should be curved and undulated throughout their entire length. Fences and walls, excluding planters, should be constructed no less than three feet high nor more than four feet high and should be built of material compatible with the principal building of the site. Where applicable, gaps in the screen should be provided to allow for pedestrian access.

When only plantings are used for screening, the width of the perimeter landscape area should be a minimum of 10 feet. If berms are provided as barriers, the width of the landscape area should be adequate to accommodate the size of the berms, based on their slope, height, and form.

Figure 22

#### EFFECT OF LANDSCAPE PLANTINGS ON AIR TEMPERATURE AND PEDESTRIAN COMFORT



Source: SEWRPC.

When structural barriers are used, the minimum width could be five feet. Plantings should be provided between the structure and the adjacent property line in order to reduce the visual impact of a structure from public view.

**Tree and Shrub Plantings:** Trees and shrubs meeting the specifications of the most recent edition of the American Association of Nurserymen's Standards 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 used should be determined by the topographic features and microclimate of the site. The spacing of plants should be determined by land use, terrace width, utility locations, and design theme.

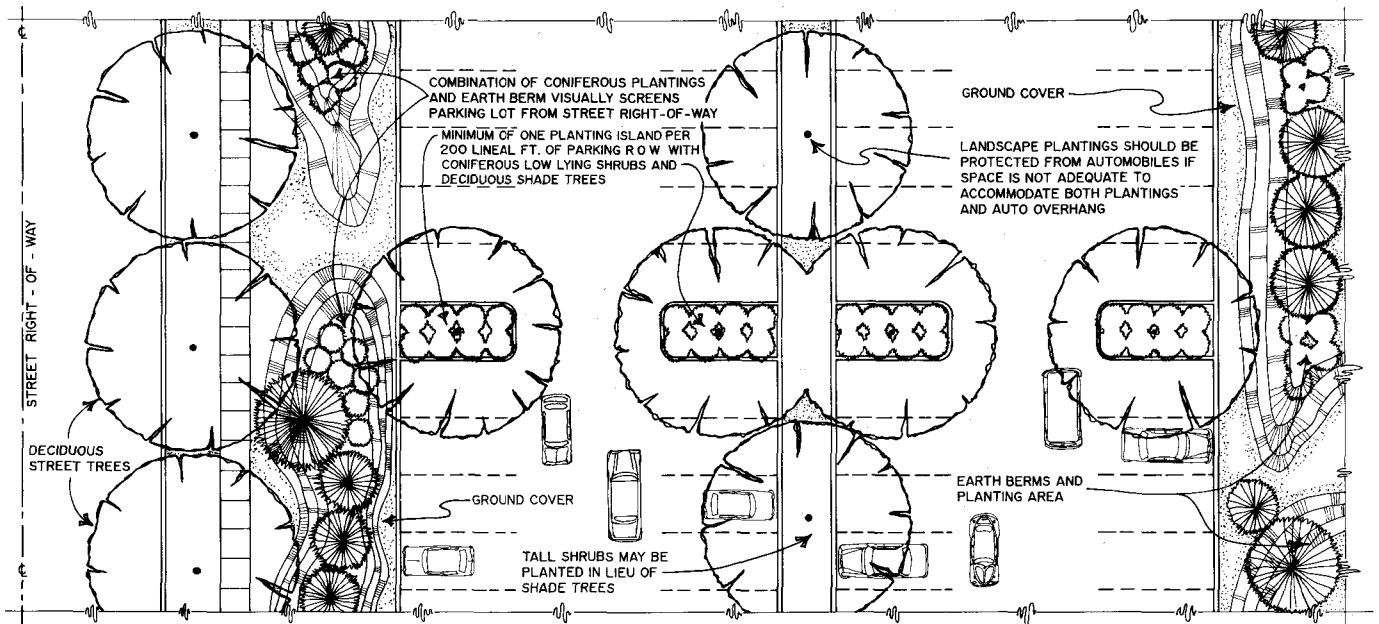
**Street Tree Location:** A minimum of one deciduous shade tree of at least 10 feet in height or two inches in diameter at breast height and meeting the American Association of Nurseryman's Standards for nursery stock should be planted for each 50 feet of frontage. Columnar varieties of shade trees could be planted closer together.

**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. Under daytime conditions, dense landscape plantings can provide noise reductions of

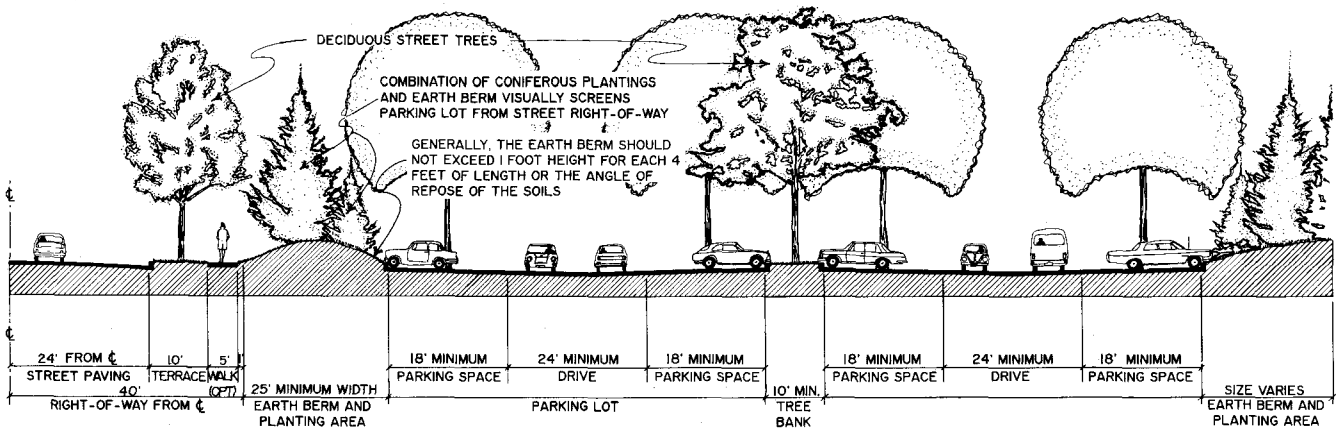


Figure 23

# RECOMMENDED LANDSCAPING FOR AUTOMOBILE PARKING LOTS



PLAN VIEW



SECTION VIEW

Source: SEWRPC.

five to eight dBA<sup>2</sup> of traffic noise. Also, earth berms 12 feet high, when combined with dense

<sup>2</sup>The source of acoustic energy is characterized by its Sound Pressure Level (SPL), usually measured in decibels (dB), by the tonal composition of the noise, and by the variation of SPL in time. Many scales for measuring noise have been devised. Of these scales, the A-weighted measure of SPL (written as dBA) is becoming more and more common as a measure of environmental noise. For this measure, the weighting of the tonal composition of the noise is similar to that of the human ear.

landscape plantings, can reduce truck noise by 10 to 15 dBA. However, landscaped sound barriers can be expected to be less effective at night than during the day since, when surface air is cool (inversions), the noise will be refracted over any noise barrier. Landscape planting noise barriers should be used whenever possible.

**Site Furniture and Amenities:** Site furniture and amenities include a myriad of man-made objects which serve pedestrian needs and add visual variety in a commercial area. Site furniture and amenity items include lighting luminaires and posts, plant containers, street seating, fences

and gates, handrails, drinking fountains, water fountains, sculpture, clocks, play equipment, bicycle racks, ashtrays, 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 the commercial area, serving an aesthetic as well as a utilitarian function, while adding a sense of design continuity and human scale.

#### Utilities and Easements

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

Utility and Drainage Easements: Utility easements of widths deemed adequate for the intended purpose, but not less than 10 feet, 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.

#### General Maintenance

A complete and thorough public maintenance program and individual private maintenance programs should be established for public lands, especially in commercial areas, in order to ensure attractiveness. Improvements to buildings and their continued positive appearance is dependent upon 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 and selecting building materials with an eye toward their durability and future maintenance requirements. Maintenance programs should be established which include the staking, watering, fertilizing, spraying, weeding, pruning, replacing and otherwise generally maintaining any landscape planting areas; cleaning up litter and emptying of trash containers in a timely fashion; sweeping, cleaning, and repairing paved surfaces; and the care and maintenance of site furniture, replacement of broken and/or vandalized parts and of burned-out light bulbs.

## ARCHITECTURAL DESIGN CRITERIA

#### Streetscape Facades

The structural shapes of buildings, their proportions, the placement of openings such as doors or windows, the placement of signs, and various other building details all contribute to the overall community 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 facade treatment plans should be developed based, in part, upon the design character of the surrounding area and the various urban design criteria developed herein, thus assuring a degree of compatibility of architectural design with neighboring structures.

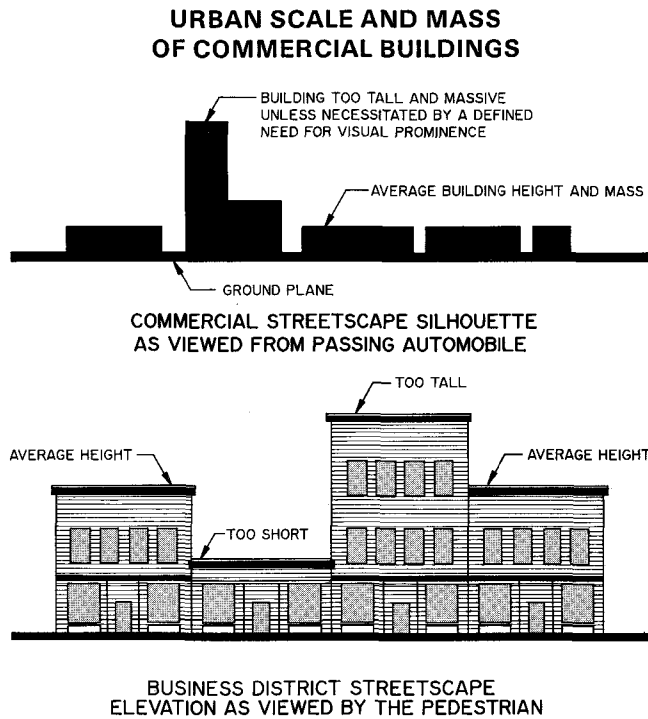
#### Yards

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 which are used by the general public should provide a walkway which exhibits safe and attractive features, including landscape plantings when practicable. Where a building site and/or yard is exposed to public view, consideration should be given to the impact of its urban features on the surrounding area. Setbacks should be determined by the Village of Hales Corners Zoning Code.

#### Urban Scale and Mass

The scale, or proportion of a building relative to its neighboring buildings, of a building to the pedestrian or observer including vehicular passengers, or of a building to the surrounding area, in general, should be considered when new buildings are built or when existing buildings are remodeled or altered. A number of visual elements which contribute to this overall scale and mass in commercial areas include the visual rhythm and proportion of the elements of the 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 presence or absence of landscape planting materials, the size and configuration of onsite open spaces, the use of building materials, the use of color, building height and width, and the presence or absence of street furniture. These elements of urban scale and mass should be considered whenever possible to create an attractive environment. Figure 24 illustrates an example of the relationship of urban scale to a commercial streetscape.

Figure 24



Source: SEWRPC.

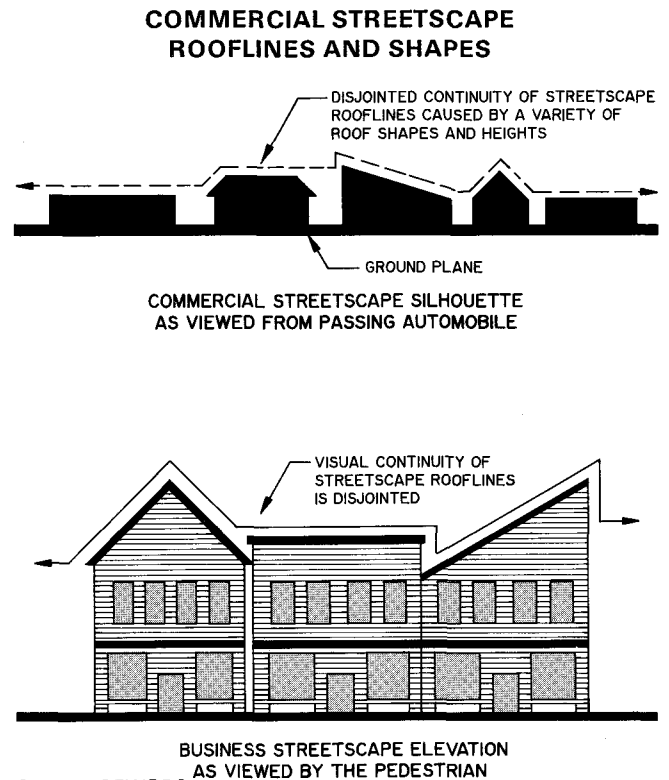
### Streetscape Roofline and Roof Shapes

The upper edges of building roofs, or rooflines, visually define the upper edge or height of the building and/or streetscape. The visual continuity of these roofline urban design elements should be maintained if warranted; building development or redevelopment with opposing rooflines should be discouraged. Figure 25 illustrates the relationship of rooflines and roof shapes to an overall commercial streetscape.

### Building Foundation Landscaping

Landscaping provided adjacent to building foundations contributes to the overall aesthetics of the site as well as enhance the architectural attractiveness of a building, as graphically shown in Figure 26. Planting areas comprised of a combination of decorative mulch, flowers, groundcover, shrubs or ornamental trees should be provided adjacent to building elevations, excluding entrances, visible from streets and public parking areas. Building foundation planting beds need not be continuous and directly against the building. Planting beds could be consolidated into large groupings of beds, not only in a continuous planting strip and at or near the dripline of roof overhangs, as illustrated in Figure 26.

Figure 25



Source: SEWRPC.

### Material and Color Selection

Material and color selection for both architectural and landscape design should be based upon several areas of concern, including material and color unity, the atmosphere and character desired, the material and color composition of surrounding buildings and landscape features, the material and color compatibility with other materials and colors, and climatic considerations. Conflicting material use and relationships, such as those shown in Figure 27, should be avoided.

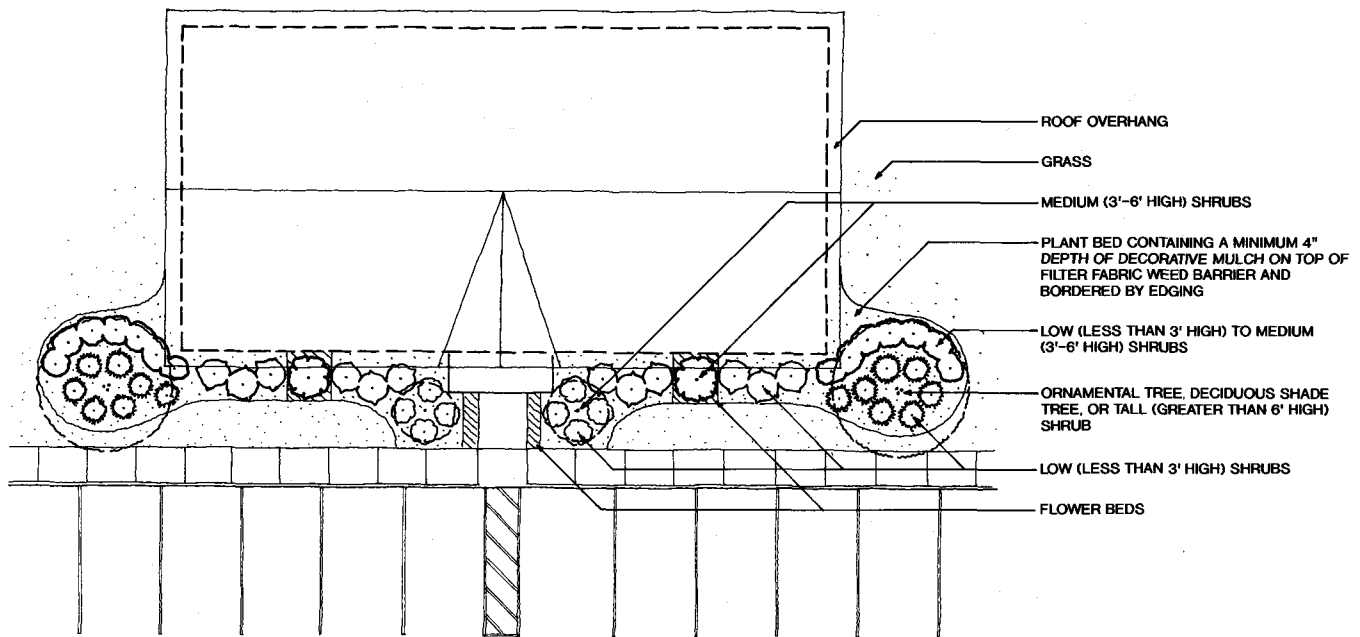
### Architectural Details

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 residential and commercial buildings is directly associated with their architectural details. Unsympathetic design changes on a building can destroy both its architectural character 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

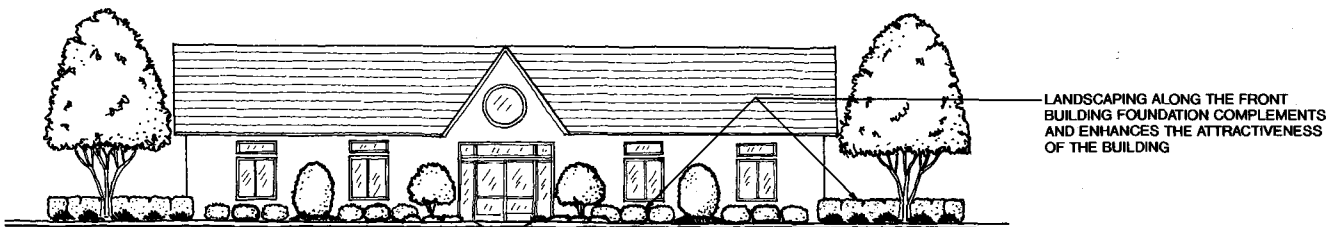
Figure 26

## BUILDING FOUNDATION LANDSCAPING

### A. LANDSCAPING ALONG BUILDING FOUNDATION WITH CONTINUOUS PLANT BEDS



PLAN VIEW



ELEVATION VIEW

retain any rich architectural details. However, efforts to "antique" 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 there is an introduction of modern detail or a mixture of old and new parts on the building, the overall visual character of the building should not be spoiled.

#### Accessory Buildings and Structures

Accessory buildings and structures should be

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

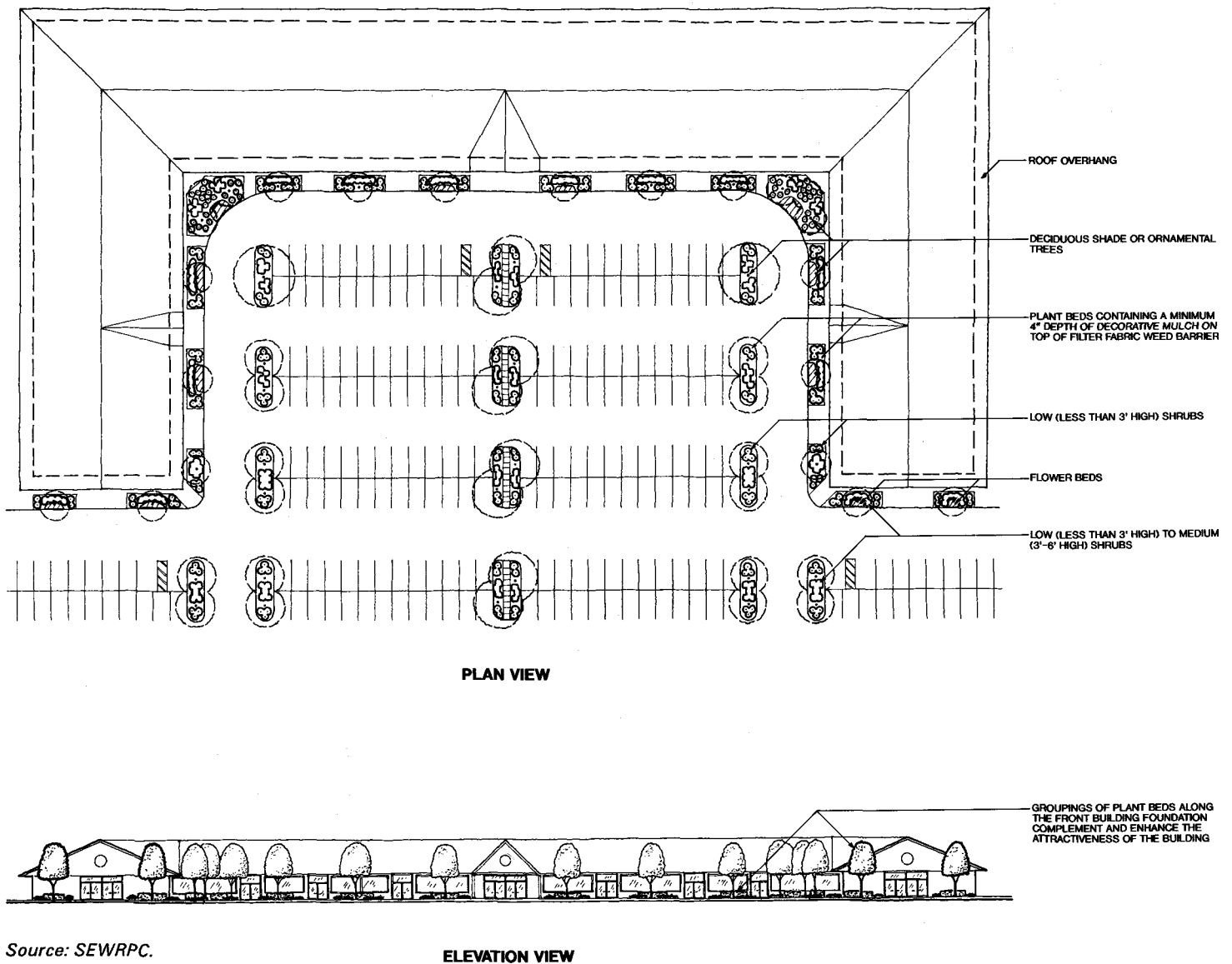
#### Dumpsters and Mechanical Equipment

Dumpsters and mechanical equipment should be installed to be unobtrusive and/or shielded from view. Dumpsters should be screened from the view of the public and adjacent properties on at least three sides by a solid fence or wall. The



Figure 26 (continued)

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



Source: SEWRPC.

height of the fence or wall should cover the full height of the dumpster, and plantings should be provided adjacent to the structure. Rooftop and grade-level mechanical equipment should also be effectively screened from public view.

### SIGNAGE DESIGN CRITERIA

#### Architectural Details

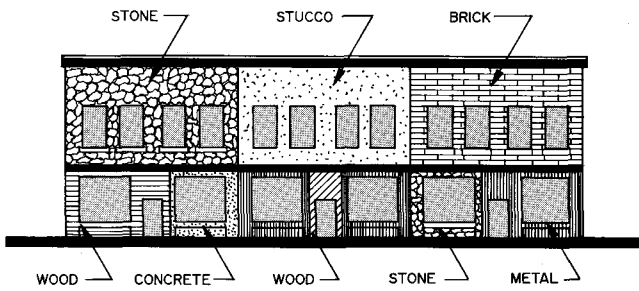
In addition to conforming with the rules and regulations of the Village's sign ordinance, signs should be designed so that they are in keeping

with the overall character of the community and its buildings. Lettering on signs should be functional as well as visually pleasing. Truly functional lettering is of a typeface which is properly spaced, is easy to read, and makes its message clear from the distance 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.

Signs should be placed in visually pleasing and logical places of the facade, which can include

Figure 27

### USE OF MATERIALS ON FACADES



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

Source: SEWRPC.

areas of the facade which are void of openings, projections, and architectural details. Signage height should be consistent between stores in the same village block.

### Landscaping for Freestanding Signs

An elevated landscape bed should be placed at the base of freestanding advertisement signs to improve their aesthetics. A planting area of at least 150 square feet, consisting of a combination of decorative mulch, flowers, groundcover, or ornamental shrubs, should be provided at the base of the sign without obstructing the sign face, as shown graphically on Figure 28.

The urban design criteria set forth in this chapter define the visual and urban design guidelines intended for the Village of Hales Corners Corridor study area. These criteria play an integral part in defining aesthetic and urban design characteristics necessary for creating a safe and attractive community. In Chapter IV urban design recommendations were developed on the basis of these criteria.

Figure 28

### ALTERNATIVE LANDSCAPING FOR FREESTANDING SIGNS

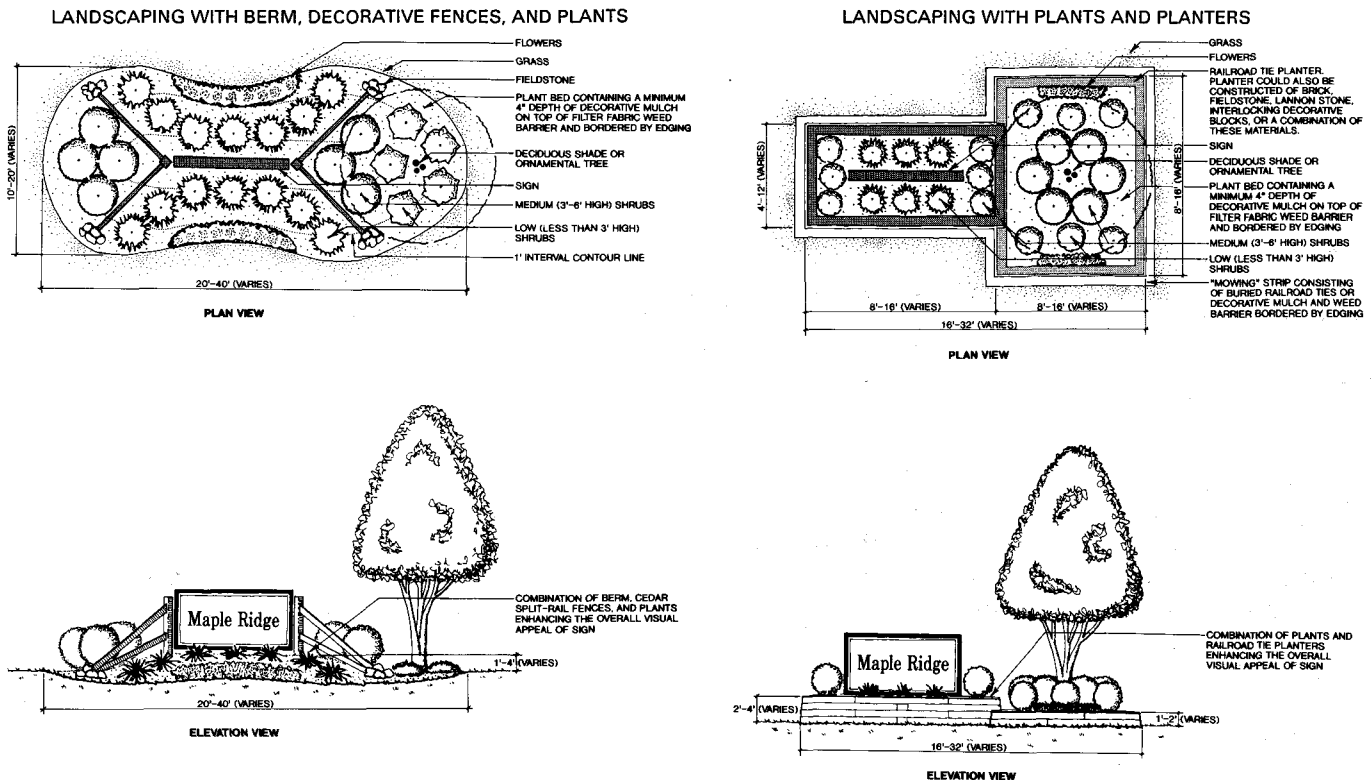
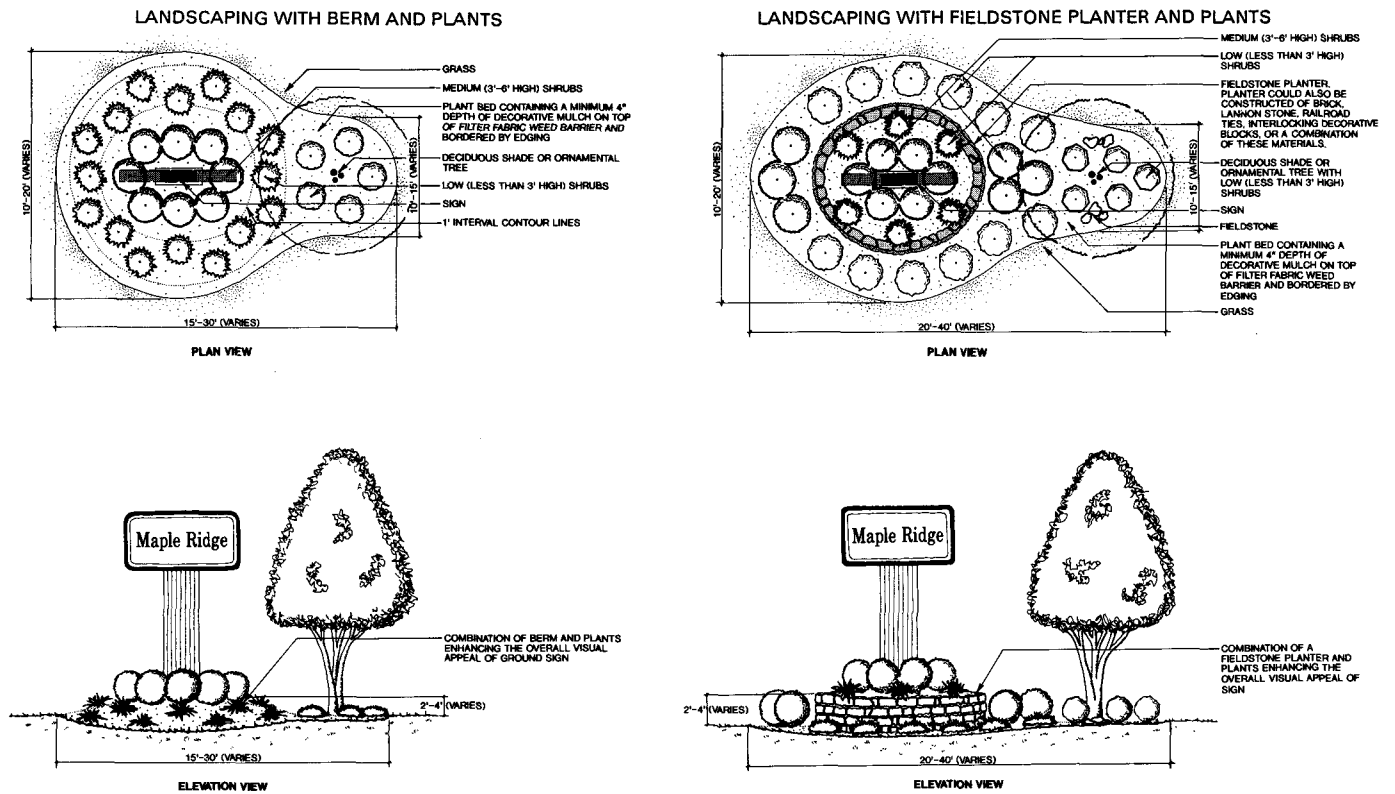


Figure 28 (continued)



Source: SEWRPC.

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## Chapter IV

### RECOMMENDED LAND USE AND URBAN DESIGN PLANS

#### INTRODUCTION

The land use, urban design, and transportation plans for the Village of Hales Corners corridor study area, as set forth in this report, consist of recommendations for the type, amount, and spatial location of various land uses in the corridor. The plans are intended to be used to help guide the physical development and redevelopment of the corridor into a more functional and attractive pattern. In accordance with the broad objectives of local government, the plans are intended to promote the public health, safety, morals, order, convenience, prosperity, and general welfare of the community.

The land use, urban design, and transportation plans should promote the public interest rather than the interests of individuals or special groups within the corridor and within the community of which the corridor is a part. The very nature of the plans contribute to this purpose, for they facilitate consideration of the relationship of any development proposal, whether privately or publicly advanced, to the overall physical development of the community. The 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 development within the corridor study area. Political coordination seeks to assure 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 development and public works development so that the planning and scheduling of public and private improvements will be both effective and efficient, avoiding conflict, duplication, and waste. Effective coordination of 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 contro-

versial development issues, including the plan itself, in an equitable and constructive manner.

The land use, urban design, and transportation plans should be long-range, providing means for taking into account long-range development needs and proposals when considering short-range actions. This purpose is intended to achieve coordination of development in time to ensure that today's decisions will lead toward tomorrow's goals. In the case of the Village of Hales Corners, the corridor land use plan is designed for a planning period extending beyond the turn of the century. In this way, the plan is intended to provide for the future as well as present needs of the Village.

The land use, urban design, and transportation plans should not be considered as rigid and unchangeable, but rather as a flexible guide to help local officials and concerned citizens in the review of 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 revised as necessary. Accordingly, the plans should be reviewed periodically to determine whether the development objectives, as set forth in Chapter III of this report, are still valid, as well as to determine the extent to which the various objectives are being realized through plan implementation over time.

The land use, urban design, and transportation plans should represent refinements of the adopted regional land use and transportation system plans so that they can meet areawide, as well as local, development objectives. The regional land use plan and, as a consequence, the corridor land use plan, while recognizing the effects and importance of the urban land market in shaping land use patterns, seek to influence the operation of that market in order to achieve a more healthful and attractive and more efficient, settlement pattern. The plans recommend that development trends be altered by encouraging intensive urban development only in those areas which are covered by soils suitable for such development, which are not subject to special hazards such as flooding, and which can readily and adequately be served by



essential municipal facilities and services, including public sanitary sewer and water supply. The plans recommend that development trends be altered by discouraging incompatible urban developments and by discouraging urban development in delineated environmental corridors and other environmentally sensitive lands.

The land use and urban design plans presented here and the transportation plan presented in the next chapter represent only several of many possible patterns of land development that could accommodate the future physical, social, and economic needs of the Village. The selection of the final plan involved the comparative evaluation during the planning process of several alternative land use patterns and supporting community facility and utility proposals against the development objectives, principles, standards, and urban design criteria previously described in this report and against significant citizen input, including that from the Corridor Plan Advisory Committee

## FACTORS CONSIDERED IN PLANNING

As noted earlier, the primary purpose of the development plans is to meet the social and economic needs and desires of the Village of Hales Corners in an efficient, economical, and environmentally sound manner in order to maintain and enhance living and working conditions for its residents. Major factors considered in creating and evaluating a corridor land use plan meeting the identified needs and desires are discussed herein.

### Population and Employment Forecasts

The population forecast presented in Chapter II of this report indicates that the population of the Village may be expected to decrease slightly by the year 2010 under the intermediate future scenario as the result of projected decrease in household size, the conversion of existing residential lands to commercial uses, and the limited availability of vacant lands for future residential development within the Village. The forecast employment level under this future scenario, however, indicates a potential increase in employment due to the possible development or redevelopment of lands for commercial use along major arterials.

### Historic and Desired Land Development Patterns

The demand for certain land uses within the corridor study area is difficult to quantify since many of the commercial developments, for example, within the Village serve a much larger population than that of the Village itself. The results of inventories and analyses of historic and current land development patterns, however, as presented in Chapter II of this report, provide an indication of land development trends within the Village, particularly along arterials. An example of a land use trend so indicated is the likely continued development of automobile-oriented commercial uses along S. 108th Street (STH 100 and USH 45) and the continued nonautomobile-oriented commercial development along W. Janesville Road (STH 24) and W. Forest Home Avenue (STH 24 and CTH 00). Less intensive commercial development may be desirable along W. Forest Home Avenue and W. Janesville Road to help maintain the residential character existing along each of these arterial corridors. The more intensive commercial developments located predominantly along S. 108th Street should continue to be confined to this corridor to preserve the residential character of the other arterial streets.

It is very important to note, however, that certain land development trends may not necessarily meet the desires of officials and residents of the Village, and, therefore, should be controlled by the use of zoning in accordance with the adopted land use plan set forth herein. An example of such an undesirable land development trend is the tendency of the real estate market to promote "strip commercial development," as evident along S. 108th Street, W. Janesville Road, and W. Forest Home Avenue.

### Land Use Transition

Another factor to be considered when developing or evaluating a comprehensive land use plan is the use of a transitional hierarchy of land development patterns between the higher intensity land uses, commercial uses, and the lower intensity land uses, single-family residential uses. For example, two- or multi-family residential development should be located, wherever practicable, between intensive commercial land uses and such less intensive land uses as single-

family dwellings in order to provide a transition between the two uses, thus reducing potential adverse impacts upon the lesser use and conflicts between the uses.

#### Lot Sizes

The size, width, and depth of lots are also important land use considerations. The size of a lot has a direct bearing on the economic feasibility of, and the traffic congestion and safety impacts attendant to, establishing certain land uses on a given parcel. Sufficient land should be designated on the land use plan for each of various types of land uses in order to accommodate proposed buildings, off-street parking spaces, loading areas, service drives, and landscape areas on defined lots, especially those along the west side of S. 108th Street. Inadequate site area may contribute to the lack of sufficient off-street parking spaces, which would either encourage people to park on heavily traveled streets or create an inconvenience to potential customers who may, as a result, seek similar services elsewhere. Also, an areally limited site may contribute to an unattractive development because of the lack of space reserved for landscaping. It may also require a driveway spacing that creates traffic safety and congestion problems.

#### Environmental Corridors and Recreation Activities

Finally, the preservation of the remaining environmental corridors and the provision of lands for additional recreation activities in public parks, as discussed below, are other elements of the land use plan that are critical to the character of the Village and the welfare of its residents.

### **INITIALLY RECOMMENDED AND LOCALLY PREFERRED LAND USE PLANS**

Based upon the consideration of relevant area-wide plans discussed in Chapter I, the land use and zoning analyses in Chapter II, and the factors discussed above, two alternative land use plans were prepared for the Village of Hales Corners corridor study area as shown on Maps 16 and 18 and illustrated in further detail on Maps 17 and 19. The initially recommended and locally preferred land use plans both identify those areas in which urban development now exists and those areas in which such development or redevelopment should be permit-

ted and encouraged, in accordance with the land development and redevelopment objectives, principles, and standards set forth in Chapter III. In addition, the plans call for the preservation of the best remaining environmental corridor lands located within the corridor study area. Each of these plans was quantitatively analyzed, with the findings presented in Table 19 and compared in that table to the existing 1989 land uses in the corridor study area. Certain land use proposals are common to both of the alternative land use plans; however, the locally preferred plan contains certain proposals advanced in response to information provided at a series of joint Corridor Plan Advisory Committee and Village Plan Commission meetings held in 1991.

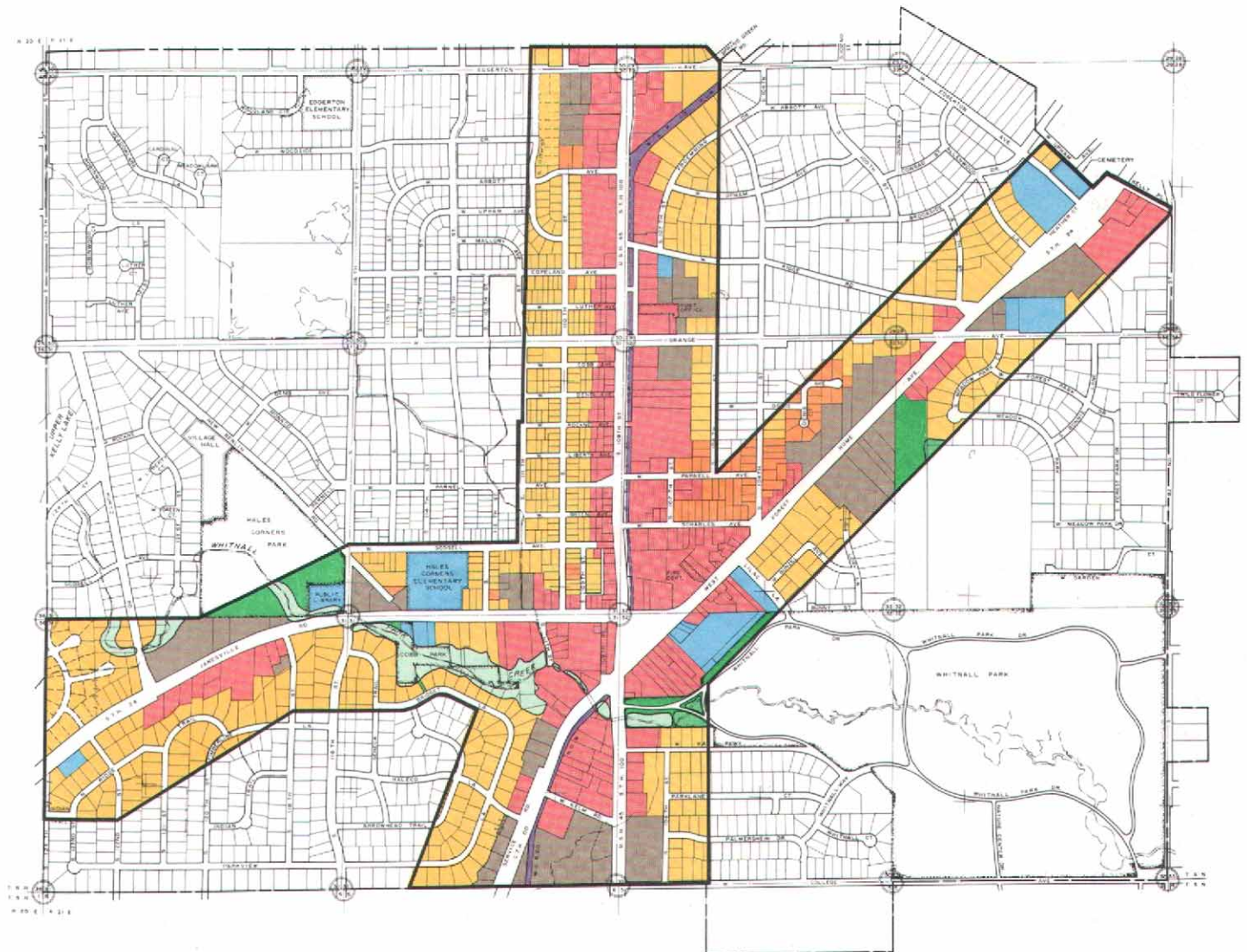
Table 20 presents an analysis of the frontage devoted to each of the general land uses existing along the three major arterial streets in 1989, as well as proposed land uses along these streets in the two alternative land use plans. The frontage along the three major arterials within the study area totals approximately 46,990 feet, or about 8.9 miles. As indicated in Table 20, commercial retail sales and services are still planned to occupy the largest portion of this total frontage under both alternative land use plans: approximately 23,710 feet, or about 51 percent of the total frontage, under the initially recommended plan; and about 23,630 feet, or about 50 percent of the total frontage, under the locally preferred plan. Residential uses are proposed to occupy the second largest portion of this total frontage under both alternative plans, approximately 14,460 feet, or about 31 percent of the total frontage, under the initially recommended plan; and approximately 12,220 feet, or about 26 percent, under the locally preferred plan.

#### Residential Land Uses

Under both alternative land use plans, new residential development within the corridor study area is proposed to occur through the creation of new residential areas contiguous to, and extending outward from, existing residential developments. Table 19 indicates that the residential land use would occupy about 336 acres, or about 47 percent, of the total corridor, under the initially recommended plan; and about 331 acres, or about 46 percent, under the locally preferred plan. All residential areas are proposed to be served by public sanitary sewer and water supply facilities. The two alternative land use

Map 16

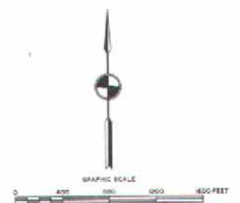
INITIALLY RECOMMENDED GENERAL LAND USE PLAN FOR THE  
VILLAGE OF HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA



LEGEND

- LOW-DENSITY SINGLE-FAMILY RESIDENTIAL DEVELOPMENT  
(10,000-SQUARE-FOOT LOTS OR GREATER)
- MEDIUM-DENSITY TWO-FAMILY RESIDENTIAL DEVELOPMENT  
(4.4 TO 8.7 DWELLING UNITS PER NET RESIDENTIAL ACRE)
- HIGH-DENSITY MULTI-FAMILY RESIDENTIAL DEVELOPMENT  
(8.8 TO 17.4 DWELLING UNITS PER NET RESIDENTIAL ACRE)
- COMMERCIAL DEVELOPMENT (SEE MAP 17 FOR SPECIFIC  
TYPES OF COMMERCIAL DEVELOPMENTS)
- COMMUNICATIONS AND UTILITIES
- GOVERNMENTAL AND INSTITUTIONAL
- PARKS AND RECREATIONAL
- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR

- EXISTING PROPERTY BOUNDARY LINE: 1989
- PROPOSED PROPERTY BOUNDARY LINE
- EXISTING STREET RIGHT-OF-WAY
- PROPOSED STREET RIGHT-OF-WAY



Source: SEWRPC.








## RESIDENTIAL DEVELOPMENT

- ## COMMERCIAL DEVELOPMENT

- OTHER LAND USES

- 
- PARKS AND RECREATIONAL  
R REGIONAL PARK  
C COMMUNITY PARK

-  EXISTING BUILDINGS/STRUCTURES  
 EXISTING PROPERTY BOUNDARY LINE  
 PROPOSED PROPERTY BOUNDARY LINE  
 EXISTING STREET RIGHT-OF-WAY  
 PROPOSED STREET RIGHT-OF-WAY

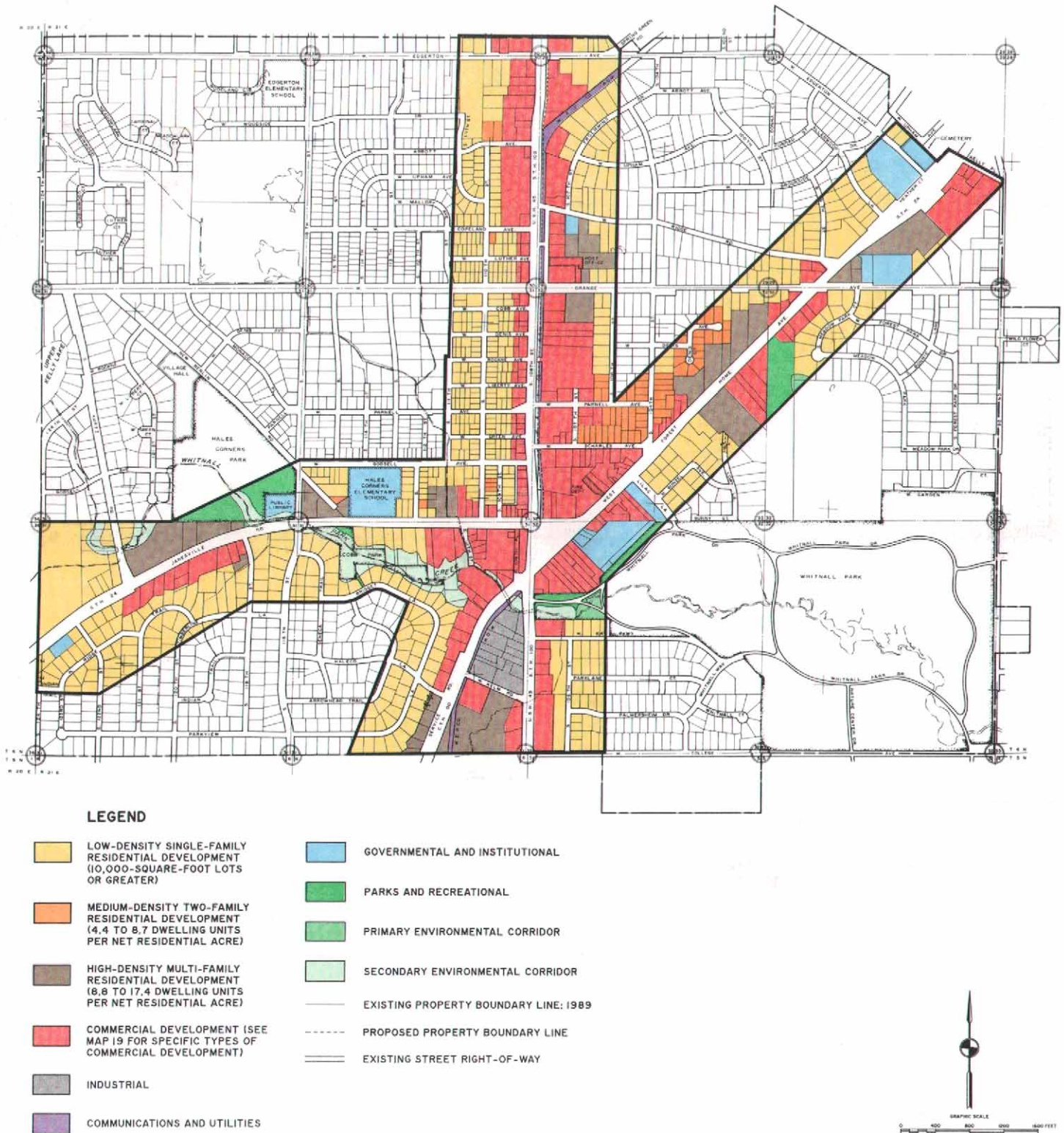
- 
- A horizontal graphic scale bar with tick marks at 0, 200, 400, and 800 feet. The text "GRAPHIC SCALE" is centered above the bar.

37



# Map 18

## LOCALLY PREFERRED GENERAL LAND USE PLAN FOR THE VILLAGE OF HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA



Source: SEWRPC.



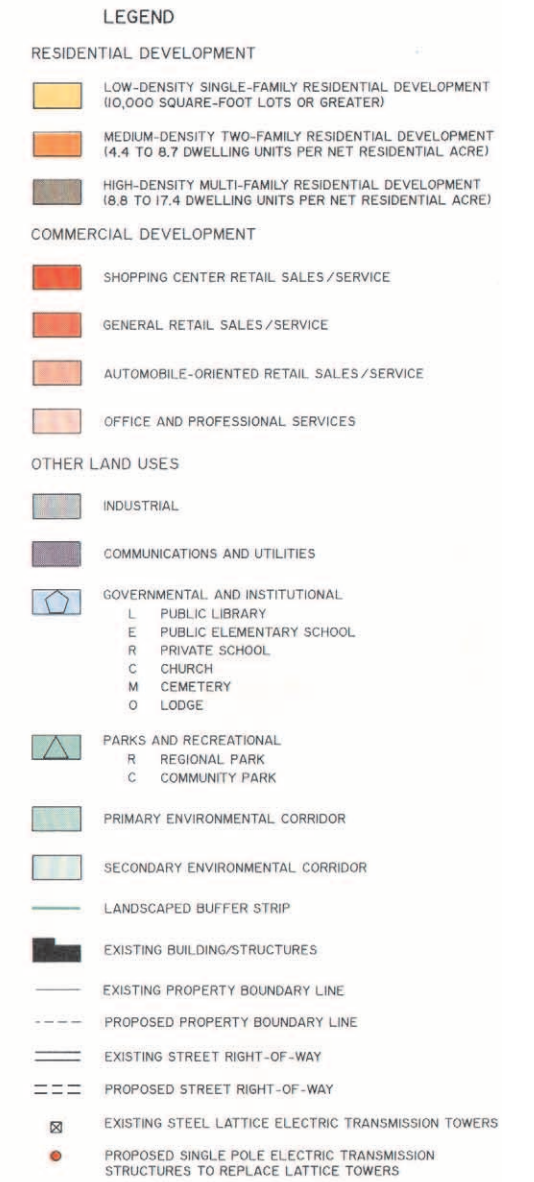




Table 19

**EXISTING AND RECOMMENDED LAND USES IN THE VILLAGE  
OF HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA**

Land Use Categories	Existing 1989 Land Uses		Initially Recommended Plan				Locally Preferred Plan			
			Planned Increment		Planned Land Uses		Planned Increment		Planned Land Uses	
	Total Acres	Percent of Total	Total Acres	Percent Change	Total Acres	Percent of Total	Total Acres	Percent Change	Total Acres	Percent of Total
<b>Residential<sup>a</sup></b>										
Single-Family . . . . .	277.1	38.4	-50.9	-18.4	226.2	31.3	-36.6	-13.2	240.5	33.3
Two-Family . . . . .	10.6	1.5	12.1	114.2	22.7	3.2	12.1	114.2	22.7	3.2
Multi-Family . . . . .	52.1	7.2	34.7	66.6	86.8	12.0	15.9	30.5	68.0	9.4
<b>Subtotal</b>	<b>339.8</b>	<b>47.1</b>	<b>-4.1</b>	<b>-1.2</b>	<b>335.7</b>	<b>46.5</b>	<b>-8.6</b>	<b>-2.5</b>	<b>331.2</b>	<b>45.9</b>
<b>Commercial<sup>a</sup></b> . . . . .	100.6	13.9	44.0	43.7	144.6	20.0	42.0	41.8	142.6	19.7
<b>Industrial<sup>a</sup></b> . . . . .	3.0	0.4	-3.0	-100.0	0.0	--	7.0	233.3	10.0	1.4
<b>Street and Highway Rights-of-Way</b> . . . . .	149.0	20.7	3.8	2.6	152.8	21.2	1.8	1.2	150.8	20.9
<b>Communications and Utilities</b> . . . . .	9.3	1.3	-0.8	-8.6	8.5	1.2	-0.8	-8.6	8.5	1.2
<b>Governmental and Institutional<sup>a</sup></b> . . . . .	29.5	4.1	5.0	17.0	34.5	4.8	3.0	10.2	32.5	4.5
<b>Parks and Recreational<sup>a,b</sup></b> . . . . .	13.0	1.8	6.5	50.0	19.5	2.7	7.0	53.9	20.0	2.8
<b>Primary Environmental Corridor</b> . . . . .	3.5	0.5	--	--	3.5	0.5	--	--	3.5	0.5
<b>Secondary Environmental Corridor</b> . . . . .	23.5	3.2	-1.0	-4.3	22.5	3.1	-1.0	-4.3	22.5	3.1
<b>Agricultural and Other Open Lands<sup>c</sup></b> . . . . .	50.4	7.0	-50.4	-100.0	0.0	--	-50.4	-100.0	0.0	--
<b>Total</b>	<b>721.6</b>	<b>100.0</b>	<b>--</b>	<b>--</b>	<b>721.6</b>	<b>100.0</b>	<b>--</b>	<b>--</b>	<b>721.6</b>	<b>100.0</b>

<sup>a</sup>Includes related off-street parking areas.

<sup>b</sup>Includes only areas for intensive outdoor recreational activities.

<sup>c</sup>Includes vacant and unused lands.

Source: SEWRPC.

plans identify three general categories of residential land use based upon the Village's current residential zoning districts: 1) low-density single-family residential areas, with a 10,000-square-foot or greater net lot area per dwelling unit; 2) medium-density two-family residential areas, with 4.4 to 8.7 dwelling units per net residential acre; and 3) high-density multi-family residential areas, with 8.8 to 17.4 dwelling units per net residential acre.

The low-density single-family residential development totals about 226 acres under the initially recommended land use plan, and about 241 acres under the locally preferred plan. Over the 1989 level, these totals represent a decrease of about 51 acres, or about 18 percent, under the initially recommended plan; and a decrease of about 37 acres, or about 13 percent, under the locally preferred plan. These areas consist mostly of existing residential lots located throughout the corridor study area. Maps 16 and 17 show a detailed lot and street system layout for two new

residential subdivisions proposed in the southwestern part of the corridor study area, north of W. Janesville Road (STH 24), and in the north-central part of the corridor study area, west of S. 108th Street (STH 100 and USH 45) and south of W. Edgerton Avenue.

The areas proposed for medium-density two-family residential development under both alternative land use plans would total about 23 acres of land, an increase of about 12 acres, or about 114 percent, over the 1989 level. These areas are located mostly in the central part of the corridor study area.

The areas proposed for high-density multi-family residential development total about 87 acres of land under the initially recommended land use plan, an increase of 35 acres, or about 67 percent, over the 52 acres of such use in 1989. Under the locally preferred plan, high-density multi-family residential development would total about 68 acres, an increase of about 16 acres, or

Table 20

**LINEAR FRONTAGE OF EXISTING AND RECOMMENDED LAND USES ABUTTING  
SELECTED ARTERIAL STREET CORRIDORS IN THE VILLAGE OF HALES CORNERS**

S. 108th Street (STH 100 and USH 45)										
Land Use Categories	Existing 1989 Land Uses		Initially Recommended Plan				Locally Preferred Plan			
			Planned Land Uses		Difference between 1989 and Recommended Plan		Planned Land Uses		Difference between 1989 and Recommended Plan	
	Linear Frontage <sup>a</sup> (feet)	Percent of Total Frontage	Linear Frontage <sup>a</sup> (feet)	Percent of Total Frontage	Linear Frontage (feet)	Percent of Change	Linear Frontage <sup>a</sup> (feet)	Percent of Total Frontage	Linear Frontage (feet)	Percent of Change
Residential (all types) <sup>b</sup>	1,460	9.0	1,230	7.6	-230	-15.8	--	--	-1,460	-100.0
Commercial (all types) <sup>b</sup>	10,500	64.4	12,540	76.9	2,040	19.4	12,290	75.4	1,790	17.1
Industrial <sup>b</sup>	80	0.5	--	--	-80	-100.0	1,020	6.3	940	1,175.0
Street and Highway Rights-of-Way	2,410	14.8	1,950	12.0	-460	-19.1	2,410	14.8	--	--
Communications and Utilities <sup>b,c</sup>	130	0.8	130	0.8	--	--	130	0.8	--	--
Governmental and Institutional	--	--	--	--	--	--	--	--	--	--
Parks and Recreational	190	1.1	190	1.1	--	--	190	1.1	--	--
Environmental Corridors	260	1.6	260	1.6	--	--	260	1.6	--	--
Agricultural and Other Open Lands <sup>d</sup>	1,270	7.8	--	--	-1,270	-100.0	--	--	-1,270	-100.0
<b>Total</b>	<b>16,300</b>	<b>100.0</b>	<b>16,300</b>	<b>100.0</b>	<b>--</b>	<b>--</b>	<b>16,300</b>	<b>100.0</b>	<b>--</b>	<b>--</b>

W. Janesville Road (STH 24)										
Land Use Categories	Existing 1989 Land Uses		Initially Recommended Plan				Locally Preferred Plan			
			Planned Land Uses		Difference between 1989 and Recommended Plan		Planned Land Uses		Difference between 1989 and Recommended Plan	
	Linear Frontage <sup>a</sup> (feet)	Percent of Total Frontage	Linear Frontage <sup>a</sup> (feet)	Percent of Total Frontage	Linear Frontage (feet)	Percent of Change	Linear Frontage <sup>a</sup> (feet)	Percent of Total Frontage	Linear Frontage (feet)	Percent of Change
Residential (all types) <sup>b</sup>	5,930	46.4	5,780	45.2	-150	-2.5	5,990	46.8	60	1.0
Commercial (all types) <sup>b</sup>	3,450	27.0	3,820	29.9	370	10.7	3,820	29.9	370	10.7
Industrial	--	--	--	--	--	--	--	--	--	--
Street and Highway Rights-of-Way	1,060	8.3	930	7.3	-130	-12.3	930	7.3	-130	-12.3
Communication and Utilities	20	0.2	20	0.2	--	--	20	0.2	--	--
Governmental and Institutional <sup>b</sup>	810	6.3	1,090	8.5	280	34.6	810	6.3	--	--
Parks and Recreational	--	--	200	1.5	200	--	270	2.1	270	--
Environmental Corridors	950	7.4	950	7.4	--	--	950	7.4	--	--
Agricultural and Other Open Lands <sup>d</sup>	570	4.4	--	--	-570	-100.0	--	--	-570	-100.0
<b>Total</b>	<b>12,790</b>	<b>100.0</b>	<b>12,790</b>	<b>100.0</b>	<b>--</b>	<b>--</b>	<b>12,790</b>	<b>100.0</b>	<b>--</b>	<b>--</b>

W. Forest Home Avenue (STH 24 and CTH 00)										
Land Use Categories	Existing 1989 Land Uses		Initially Recommended Plan				Locally Preferred Plan			
			Planned Land Uses		Difference between 1989 and Recommended Plan		Planned Land Uses		Difference between 1989 and Recommended Plan	
	Linear Frontage <sup>a</sup> (feet)	Percent of Total Frontage	Linear Frontage <sup>a</sup> (feet)	Percent of Total Frontage	Linear Frontage (feet)	Percent of Change	Linear Frontage <sup>a</sup> (feet)	Percent of Total Frontage	Linear Frontage (feet)	Percent of Change
Residential (all types) <sup>b</sup>	7,320	40.9	7,450	41.6	130	1.8	6,230	34.8	-1,090	-14.9
Commercial (all types) <sup>b</sup>	5,460	30.5	7,350	41.1	1,890	34.6	7,520	42.0	2,060	37.7
Industrial <sup>b</sup>	--	--	--	--	--	--	1,050	5.9	1,050	--
Street and Highway Rights-of-Way	1,900	10.6	1,900	10.6	--	--	1,900	10.6	--	--
Communication and Utilities <sup>b,c</sup>	220	1.2	--	--	-220	-100.0	--	--	-220	-100.0
Governmental and Institutional <sup>b</sup>	650	3.6	940	5.2	290	44.6	940	5.2	290	44.6
Parks and Recreational	--	--	110	0.6	110	--	110	0.6	110	--
Environmental Corridors	150	0.9	150	0.9	--	--	150	0.9	--	--
Agricultural and Other Open Lands <sup>d</sup>	2,200	12.3	--	--	-2,200	-100.0	--	--	-2,200	-100.0
<b>Total</b>	<b>17,900</b>	<b>100.0</b>	<b>17,900</b>	<b>100.0</b>	<b>--</b>	<b>--</b>	<b>17,900</b>	<b>100.0</b>	<b>--</b>	<b>--</b>

<sup>a</sup>Frontage includes linear distance abutting each side of the right-of-way.

<sup>b</sup>Includes related off-street parking areas.

<sup>c</sup>The portion of the Wisconsin Electric Power Company right-of-way that aligns parallel with the S. 108th Street and W. Forest Home Avenue rights-of-way were not included in the category.

<sup>d</sup>Includes vacant and unused lands.

Source: SEWRPC.

about 31 percent, over the 1989 level. These areas are typically located near and along arterial streets and highways or collector streets in order to provide ease of vehicular access to these facilities. Also, these areas are generally located in convenient proximity to commercial retail and service centers.

#### Commercial and Industrial Land Uses

Under the initially recommended land use plan, commercial retail sales and service areas would encompass an area of about 145 acres, or about 20 percent of all the land use in the corridor study area, if developed as planned. Under the locally preferred land use plan, this type of land use would encompass an area of about 143 acres, or about 20 percent of all the land in the corridor study area. In both alternative plans, this is an increase of about 44 percent and 42 percent, respectively, over the 1989 level. The planned commercial areas under the initially recommended plan would include all of the conversion of approximately three acres of existing industrial uses in 1989 into commercial uses. The locally preferred plan, on the other hand, recommends approximately 10 acres of land for industrial uses in the south-central part of the corridor, an increase of about seven acres, or about 233 percent over the 1989 level. Most of the commercial areas shown on both alternative plans represent an expansion of already existing commercial retail sales and service land uses located along the major arterial streets.

More refined and detailed plans for commercial retail sales and service development in the corridor study area are shown on Maps 17 and 19. These plans identify four basic types of commercial uses: shopping center retail sales and service, general retail sales and service, automobile-oriented retail sales and service, and office and professional business services. The principal types of businesses in each of these four groups are defined as follows and would generally be similar to those indicated in Table 13 of Chapter II:

1. Shopping centers are generally characterized by a large shopping complex consisting of two or more stores sharing onsite customer parking facilities and a shopping environment geared to pedestrians. Typical uses in this category include general merchandise stores, food stores, department stores, gift shops, personal services,

banks and savings and loan institutions, and restaurants, but not including drive-in or drive-through establishments.

2. General retail sales and services are characterized by individual stores with onsite parking for customers. Uses typical of such commercial areas are similar to many of those found in shopping centers, including gift shops, photography studios, art galleries, sporting equipment stores, beauty parlors, bakery stores, or ice cream shops. Restaurants are included in this category, but not drive-in or drive-through types of restaurant facilities.
3. Uses typical of automobile-oriented retail sales and service include gasoline stations, automobile sales and service, car washes, drive-in banks, and restaurants, including drive-in and drive-through restaurant facilities.
4. Office and professional services include the provision of offices and services related to clinical services and "professional services" such as financial services, travel agencies, and consultation services.

#### Communication and Utility Land Uses

Both alternative land use plans identify a total of approximately nine acres for communication and utility land uses, or about one percent of the total land in the corridor study area. This includes the continued use of most of the existing Wisconsin Electric Power Company's right-of-way with a decrease in the width of this right-of-way to allow for the future widening of the north segment of S. 108th Street (STH 100 and USH 45), between the north corporate limits of the Village and W. Janesville Road (STH 24), as shown on Maps 16 to 19. Ideally, all overhead utility lines should be buried, as indicated in the initially recommended land use plan shown on Map 17. If this is too costly, then the distribution lines now on wooden poles should be buried and the "pylon" towers should be replaced with less visually cluttered single poles, as indicated on the locally preferred land use plan shown on Map 19.

#### Governmental and Institutional Land Uses

Governmental and institutional land uses under the initially recommended land use plan would occupy a total of about 35 acres, or about



5 percent of the total land in the corridor study area. This represents an increase of about five acres, or about 17 percent, over the 1989 level. Under the locally preferred land use plan, these uses would encompass an area of approximately 33 acres, or about 5 percent of the total land in the corridor study area. This represents an increase of about three acres, or about 10 percent, over the 1989 level. Under both alternative plans, these uses include the continuation of already existing governmental and institutional uses. The difference between the two alternative plans in that respect is that the initially recommended plan shows the relocation of the existing fire station to a more suitable location. On that plan, the new fire station is recommended to be located on a larger site to be shared with the Village Public Works Department on the south side of Janesville Road, adjacent to Cobb Park. This station would be located in the western half of the Village, where most of the fire calls have occurred in the past, and yet be close to the commercial activities located along the major arterials. The locally preferred plan does not designate a site for a new fire station since the Village Plan Commission wished to postpone determination of such a location to a later date.

#### Park, Recreation, and Open Space Land Uses

The park and recreation uses shown on both alternative land use plans are based, in part, upon recommendations contained in SEWRPC Planning Report No. 27, A Regional Park and Open Space Plan for Southeastern Wisconsin, and a Wisconsin Department of Natural Resources report entitled An Outdoor Recreation Plan for the Village of Hales Corners, Wisconsin—1973. Detailed recommendations for park and recreation land uses are provided in the latter report. Both alternative land use plans call for the expansion of existing parks in the corridor study area to a total of about 20 acres, or 3 percent of the land use in the corridor study area.

In 1989, there were three parks in the Village of Hales Corners corridor study area: Hales Corners Park and Cobb Park, community park sites owned by Milwaukee County and the Village, respectively, and Whitnall Park, a county-owned regional park. The two alternative land use plans propose that these sites be maintained for outdoor recreation use. Also, these plans propose that additional land be

purchased to expand the southern part of Hales Corners Park to include approximately 13,000 square feet of secondary environmental corridor areas and to expand Cobb Park to the east to include approximately one acre of secondary environmental corridor along Whitnall Park Creek. The land use plan recommends about 1.4 linear miles of trail facilities such as bike and/or hiking trails in the corridor study area. This is discussed in detail in the urban design section of this chapter.

#### Environmental Corridors

Other open space uses indicated on the plan include primary and secondary environmental corridors. Under both alternative land use plans, primary environmental corridors would encompass approximately 3.5 acres, or about 0.5 percent of the total corridor study area. These corridors are located primarily in Whitnall Park, along Whitnall Park Creek. Under these plans, it is recognized that existing public outdoor recreation and related open space uses generally serve to protect such corridors. Therefore, both alternative plans recommend that such uses be maintained for resource preservation and limited recreation purposes and that such maintenance be promoted through proper zoning.

The secondary environmental corridors in the study area are generally located along Whitnall Park Creek. These corridors would encompass about 23 acres, or about 3 percent of the total study area. It is recommended that the secondary environmental corridor lands currently held in public park and open space use, or in compatible private open space use, be maintained in that status.

Pedestrian-bicycle recreational trails are advanced by the plan, as shown on Map 20 in the urban design section of this chapter. These trails will assist in linking both the man-made and natural features of the Village for recreational as well as utilitarian purposes. A more detailed description of this recommended trail system is also presented in the urban design section.

#### Transportation System Development

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 development be so designed as to protect the

efficiency of the arterial 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 level of disruption new transportation improvements may cause to existing development. Recommendations for improving the arterial network in the corridor study area are discussed below and in further detail in Chapter V.

## SUGGESTED URBAN DESIGN PLAN

In the initial stage of the planning process, the Village Plan Commission requested that the land use plan provide general urban design guidelines for the improvement of the Village's urban developments within the study area. While it is not the purpose of the land use plan to provide detailed subarea studies and specific development and redevelopment recommendations, which would require a structural conditions survey, a commercial market analysis, and site- or building-specific improvement designs, it was determined that the plan could set forth an overall urban design development framework for future efforts to improve the function and image of the corridor study area as well as of the Village as a whole. This framework is intended to represent the development policy of the Village toward urban developments and redevelopments. It should be used as a basis for future development decisions and for the preparation of the detailed design of site-specific improvement projects. The framework is based upon problem identification and upon analyses of the land use, the traffic circulation, and the visual character of the area. It is recognized that merchandising and customer relations have a significant impact upon the character and success of the businesses within the Village; however, the consideration of such factors is outside the scope of a land use planning effort.

### General Urban Design Discussion

In Chapter II of this report, visual and urban design problems as well as positive attributes were identified within the arterial corridors concerned. In analyzing and applying the resulting information, several major urban design elements were addressed, including the creation of a "village center," urban massing, overhead utility lines, street lights, streetscaping, offsite landscaping, architectural compatibility, and certain transportation related elements.

In 1989, the Village had few such landscape plantings as flowers, shrubs, and trees grouped in clearly defined planting beds within the medians of the arterials concerned. Street trees and other general landscape materials were almost nonexistent along the arterials. Offsite landscaping along building elevations, in parking lots, around the periphery of sites, and at the base of advertising signs were also nonexistent or limited to certain areas. Landscape plantings in arterial right-of-ways and on abutting properties can help materially to visually define the street lines, add texture and natural color along the arterials, provide needed visual screening, and fill spaces which are currently void of design significance. Together with the building masses, landscape plantings can form uniform and cohesive enclosures along the streetscape. It is important that such plantings be placed so as to emphasize the urban design character of the Village rather than to obscure such character.

The proper maintenance of landscaping as well as buildings in the study area will help retain the aesthetic appeal of such buildings and grounds over time. Landscaping should be provided only if it will be properly maintained by watering, pruning, mowing, edging, staking, fertilizing, spraying, and replacing when necessary. Otherwise the function and visual appeal of developments or redevelopments with poorly maintained landscape elements could be worse than those without any such features. To ensure that these features are properly installed and maintained, upon submittal and approval of proposed landscape plans, a comprehensive maintenance schedule and a bond should be required to ensure the installation of landscape materials in accordance with the approved plans and the survival and proper maintenance of such materials over time.

### Potential Urban Design Solutions

Based, in part, on the urban design criteria established in Chapter III, specific recommendations for addressing the urban design related problems defined in Chapter II of this report are herein provided. Transportation-related urban design solutions are also considered. The appearance and proper design of sites within the study area and the entire Village, consistent with the urban design criteria outlined in Chapter III and the suggested urban design solutions herein recommended, will help to produce an attractive community and help to stabilize or increase

property values to the advantage of both the community and the individual property owner.

**Village Center:** The Village now lacks a clearly identifiable "village center" readily noticeable by both pedestrians and occupants of motor vehicles traveling along the major arterials. By better utilizing and enhancing the large triangular landscaped island that is located in the center of the Village and capitalizing on the nodes, or landmarks, surrounding this island, a distinctively recognizable "village center" could be developed. This "village center" would project a unique image for the Village that would signify to all that they are in the Village of Hales Corners.

Figure 29 illustrates one of many potential urban design options for creating such a center and redeveloping surrounding properties affected by the proposed arterial street realignment of a portion of W. Forest Home Avenue. Other detailed urban design plans for the defined "village center" are documented in a report titled, Hales Corners Village Center, prepared by Planning and Design Institute, Inc., in 1992.

Figure 29 illustrates the closing of a segment of W. Forest Home Avenue where it intersects with W. Janesville Road (STH 24) and S. 108th Street (STH 100 and USH 45). The general design concept of this illustration attempts to interlink the environmental corridors in Cobb Park and Whitnall Park to create a river walk with recreation trail-type activities. It also attempts to make accessible the triangular island that is to be developed as an attractive green space. The triangle might feature in its center a fountain surrounded by a cascade of weathered-edge Lannon stone connected to another such fountain by a small man-made creek while allowing for commercial development to the southeast of the triangle and an opportunity to link these areas with Whitnall Park. This urban design concept basically accommodates urban development while enhancing and preserving significant natural features such as those along Whitnall Park Creek, in order to attract people to the "village center."

If a segment of W. Forest Home Avenue is to be closed, a significant change in the existing traffic patterns may be expected: a substantial increase in the volume of turning movements at

the intersection of S. 108th Street (STH 100 and USH 45) and W. Janesville Road (STH 24) and an increase in the potential for traffic conflicts and accidents. The realignment, widening, and extension of S. 111th Street between W. Janesville Road and W. Forest Home Avenue would, in part, alleviate these traffic problems by providing an alternative route for traffic currently traveling on the segment of W. Forest Home Avenue proposed to be abandoned. A traffic engineering study should be conducted prior to developing a proposed "village center" to analyze more fully the potential traffic impacts of closing the segment of W. Forest Home Avenue concerned.

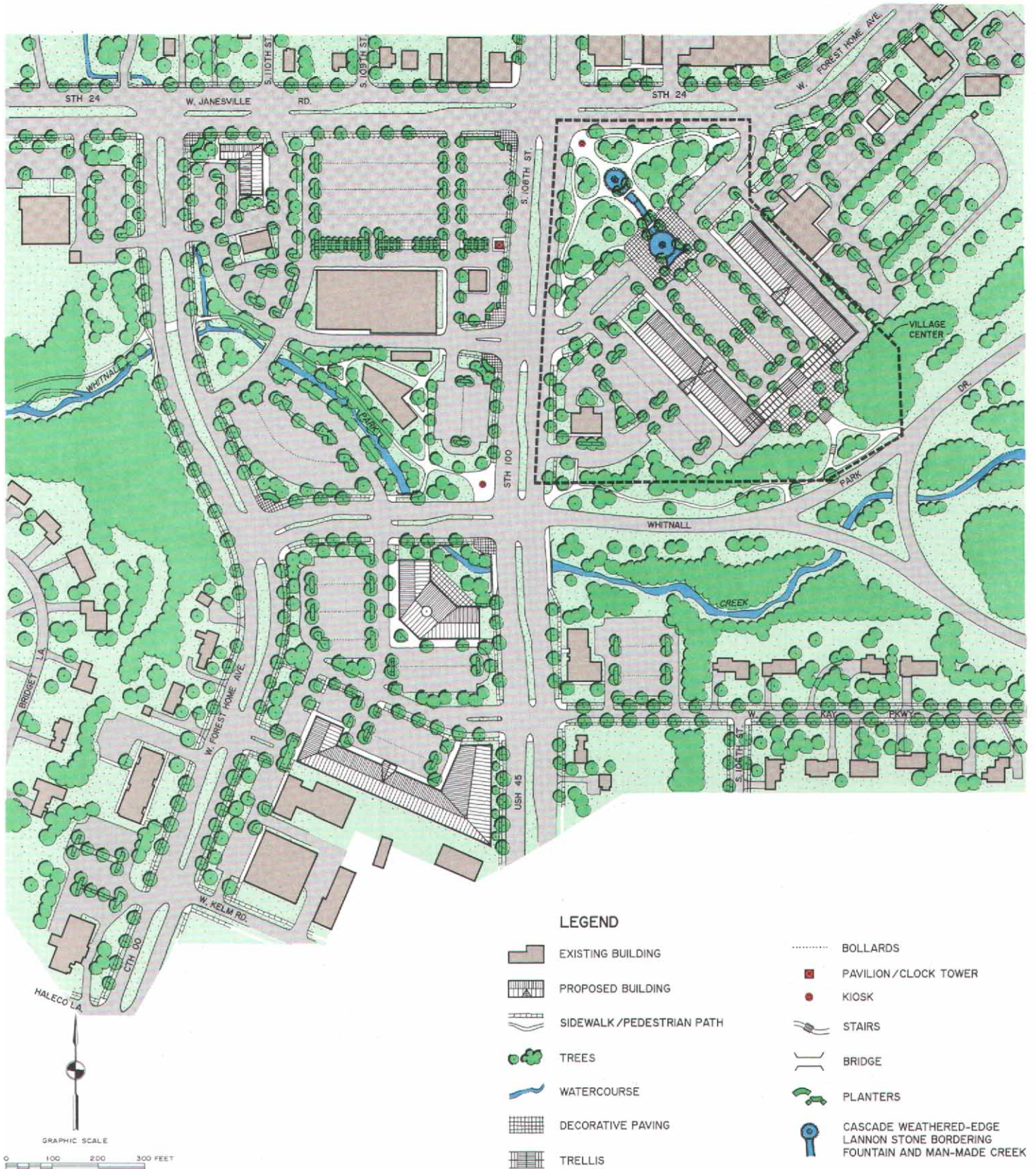
**Urban Mass:** The urban mass, that is, three-dimensional objects such as shrubs, trees, berms, fences, walls, or buildings, along the northern segment of S. 108th Street, between W. Janesville Road and the north corporate limits of the Village, appears to be unbalanced if the centerline of this arterial street is assumed to serve as the line of symmetry, as illustrated by the building masses in Figure 30. This contributes to the perception that the Village is divided by S. 108th Street into an "east side" and a "west side." This negative perception could be offset by eventually replacing the existing buildings located close to the right-of-way on the west side of S. 108th Street with new buildings set back from the centerline of the street at a distance equal to the set back on the opposite side, as illustrated in Figure 31. Another solution is installing such landscape elements as groupings of shrubs and trees on both sides of the arterial. Figure 32 illustrates how deciduous shade trees could provide a visual balance of urban massing along this arterial while maintaining the existing buildings. It is recommended that both the massing of landscaping and buildings be used to create a more balanced and cohesive urban mass along the north segment of S. 108th Street, as illustrated in Figure 33.

**Utility Lines:** The overhead wires and supporting structures of the utility facilities create a sense of visual clutter along the arterial streets concerned, especially along S. 108th Street, as shown in Figure 34. Two general solutions are available to alleviate this problem. First, the distribution lines on wooden poles could be buried while the transmission line towers are retained or converted to less visually obtrusive single-pole supports. The burial of the distribu-



Figure 29

POTENTIAL "VILLAGE CENTER" AND THE REDEVELOPMENT OF AFFECTED PROPERTIES

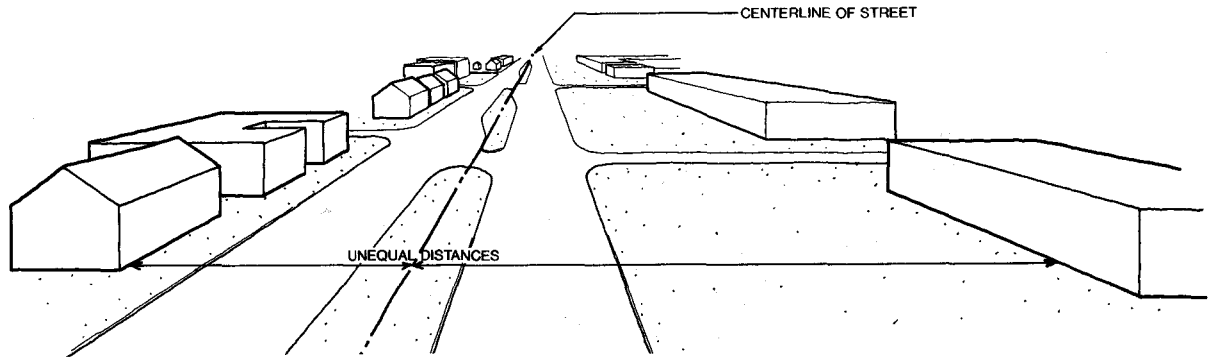


Source: SEWRPC.



Figure 30

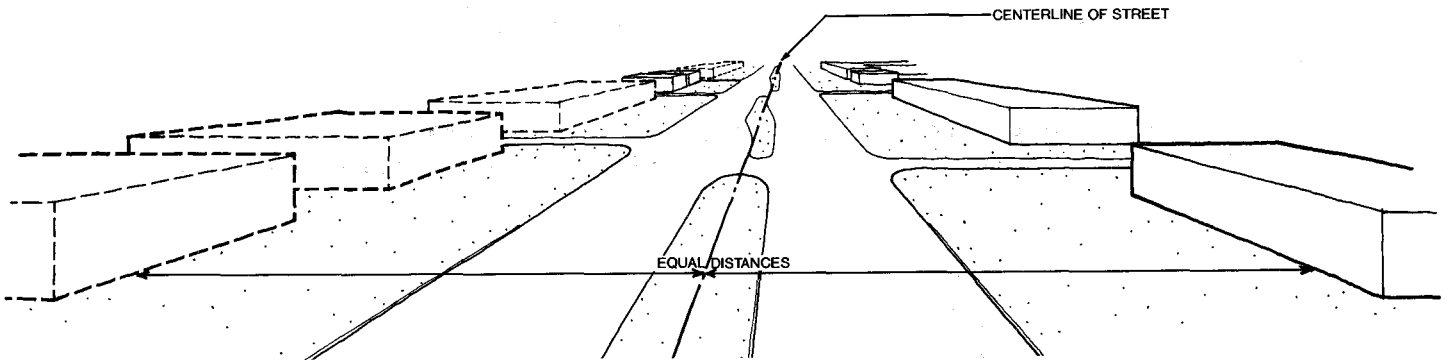
**EXISTING UNBALANCED BUILDING MASSING ALONG S. 108TH STREET LOOKING NORTH FROM W. GODSELL AVENUE: 1989**



Source: SEWRPC.

Figure 31

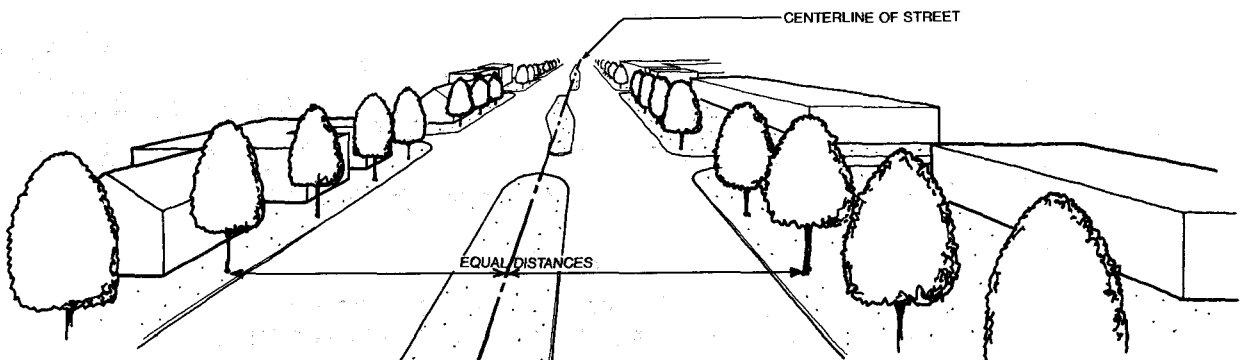
**POTENTIAL BALANCING OF URBAN MASS WITH NEW BUILDINGS ALONG S. 108TH STREET LOOKING NORTH FROM W. GODSELL AVENUE**



Source: SEWRPC.

Figure 32

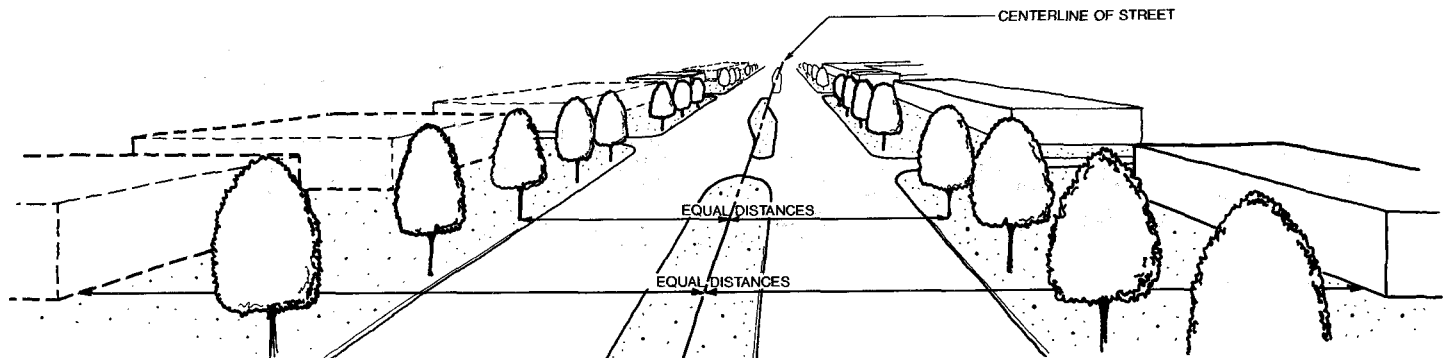
**POTENTIAL BALANCING OF URBAN MASS WITH STREET TREES ALONG S. 108TH STREET LOOKING NORTH FROM W. GODSELL AVENUE**



Source: SEWRPC.

Figure 33

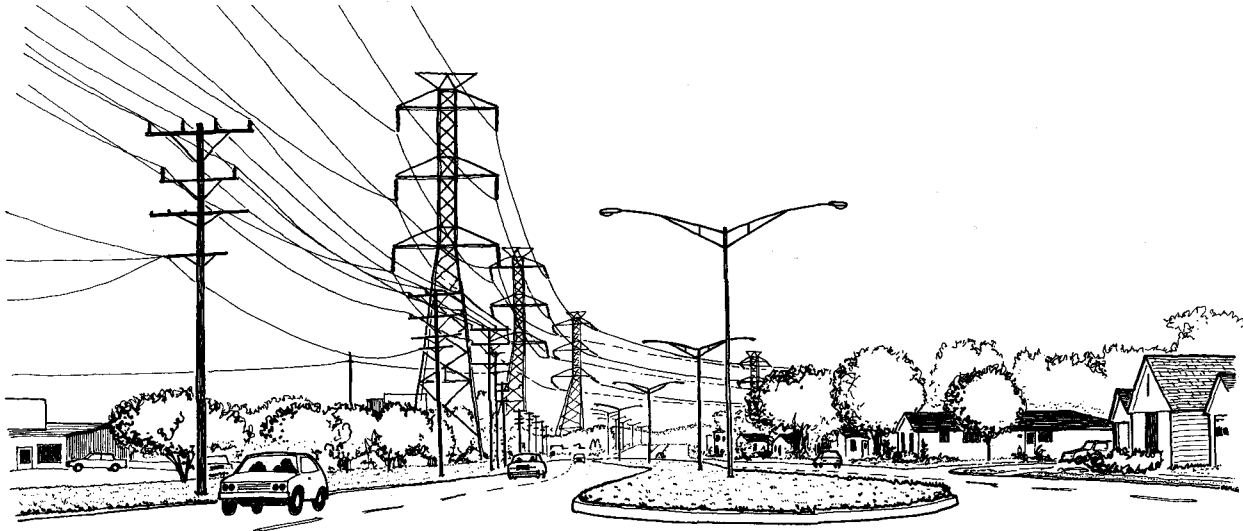
**POTENTIAL BALANCING OF URBAN MASS WITH STREET TREES AND NEW BUILDINGS ALONG S. 108TH STREET LOOKING NORTH FROM W. GODSELL AVENUE**



Source: SEWRPC.

Figure 34

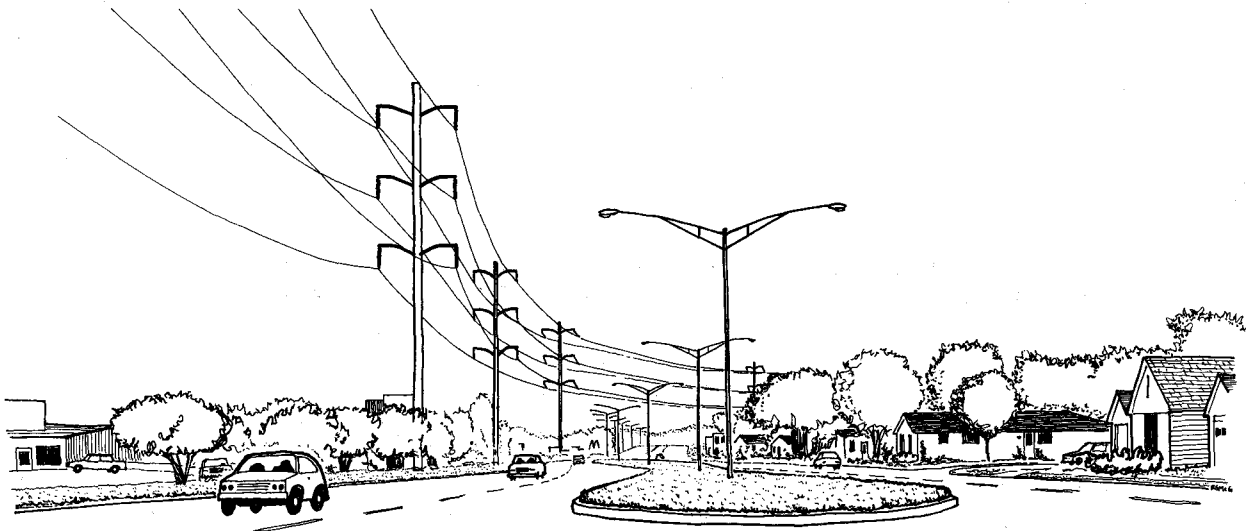
**EXISTING VIEW ALONG S. 108TH STREET LOOKING SOUTH FROM W. PARNELL AVENUE  
SHOWING VISUAL CLUTTER OF OVERHEAD UTILITY LINES AND SUPPORTING STRUCTURES: 1989**



Source: SEWRPC.

Figure 35

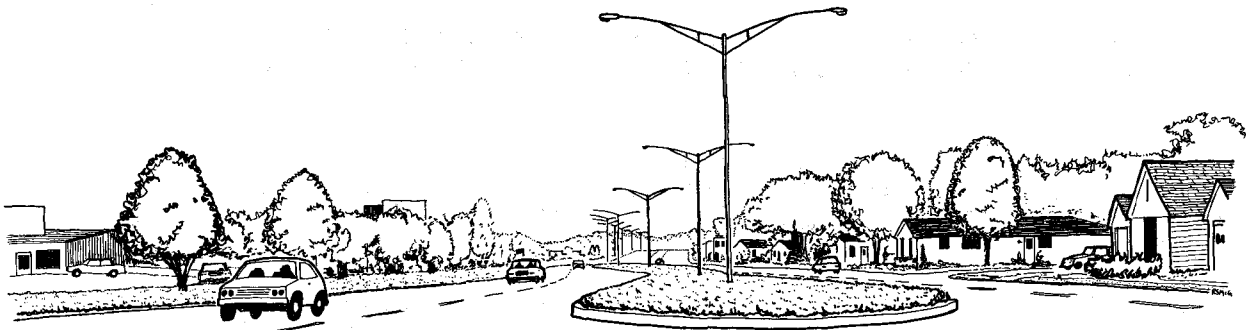
**POTENTIAL VIEW ALONG S. 108TH STREET LOOKING SOUTH FROM W. PARNELL AVENUE AFTER  
THE CONVERSION OF PYLON TOWERS TO SINGLE POLES AND THE BURIAL OF DISTRIBUTION LINES**



Source: SEWRPC.

Figure 36

**POTENTIAL VIEW ALONG S. 108TH STREET LOOKING SOUTH FROM  
W. PARNELL AVENUE AFTER THE BURIAL OF ALL OVERHEAD UTILITY LINES**



Source: SEWRPC.

tion lines will substantially reduce the amount of visual clutter at the human scale. Another alternative is burying all above-ground utility lines. Figure 34 shows the existing visual clutter of utility lines and structures along S. 108th Street, while Figures 35 and 36 illustrate the reduction of clutter possible if each of the two aforementioned solutions were implemented. Ideally, it is recommended that eventually all overhead utility lines be buried. If this alternative is too costly, then the distribution lines on wooden poles should be buried and the pylon towers replaced with single poles, as shown on Map 19 and illustrated in Figure 35.

**"Double" Light Poles:** The two rows of street lights located in the medians in the W. Janesville Road and W. Forest Home Avenue rights-of-way create a sense of visual clutter, appear to divide the arterial roadways in half, and increase the potential for traffic accidents, since these poles are positioned in the vehicular "recovery" area of the medians. These street lights could be consolidated into a single row of street lights with two lights per pole to be located in the center of the median outside of the vehicular "recovery" area. The same amount of illumination would be provided as before, while the degree of visual clutter would be reduced. In addition, this would create a sense of a uniform street lighting consistent with that provided along the other arterials concerned. The visual perception of the "double" poles bisecting the arterial would also be less pronounced if the lighting were converted to a single pole, as illustrated in Figure 37.

**Streetscaping:** Street trees, raised median plantings, and decorative banners are significant streetscape elements currently lacking within the arterial corridors concerned. The medians along the south portion of W. Forest Home Avenue, between S. 108th Street and the south corporate limits of the Village, also add to the unattractiveness of the study area with their unappealing guardrails and gravel shoulders spread into the grassed areas, as shown in Figure 38. By removing the guardrails and reconstructing these medians and lining the street pavement with concrete curbing, more attractive medians and clearly defined pavement edges could be achieved, as shown in Figure 39. The arterials concerned could be further enhanced by providing sidewalks, street trees,

and colorful banners hung from light poles, as illustrated in Figure 40. In addition, large elevated plant beds in the arterial medians, such as those shown in Figure 41, would dramatically improve the streetscape in the study area.

It is important to note that any landscaping in the state trunk highway rights-of-way will require a permit from, and must meet the requirements of, the Wisconsin Department of Transportation (WisDOT). One of the Department's policies allows plants with a trunk diameter of four inches or greater in the tree banks alongside the highways concerned, but prohibits such plants in the medians. Tall shrubs shaped into a tree form, instead of large deciduous trees, could provide some vertical accent in the highway medians, as illustrated in Figure 41. If WisDOT granted a variance to its requirement and allowed plants that were four inches or greater in trunk diameter in the medians, then deciduous shade or ornamental trees should be used in lieu of the tree-form shrubs. Ultimately, the overall streetscape image of the study area should be improved by using all the landscape elements discussed herein.

**Advertising Signs:** Most existing advertising signs adjacent to the arterial streets in the Village are provided with little or no landscaping around the base of the signs. In addition, the existing Hales Corners "Welcome" signs are not highly visible from the public streets because of their location and small lettering. In two locations no such sign is provided at the corporate limits to welcome traffic entering the Village from the City of Franklin on S. 108th Street and W. Forest Home Avenue.

The provision of flower beds, colorful shrubs, and flowering crab trees in an elevated plant bed with decorative mulch at the base of signs, without obstructing the face of the signs, would serve to improve the noticeability as well as appearance of such signs, as illustrated in Figure 28 in Chapter III. "Welcome" signs should use large lettering and be sited at roadside locations where the sign is readily visible and readable by occupants of vehicles entering the Village on the major arterials. Generally, the fewer the words on sign faces, the more likely people will be able to read the signs with ease. Large lettering properly spaced on signs is more easily read from long distances and from moving vehicles.

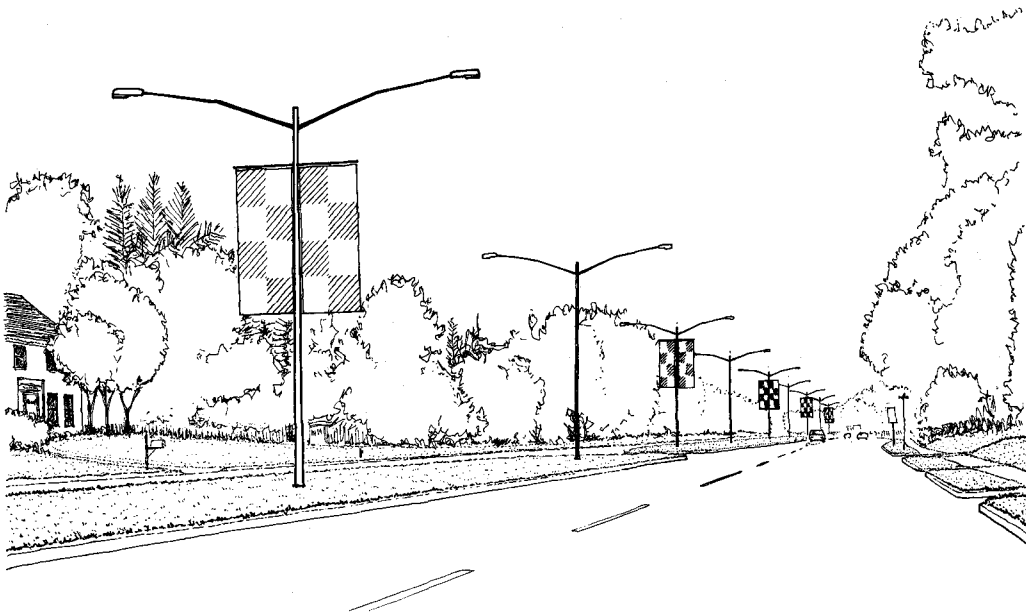
**Figure 37**

**CONVERSION OF PAIRED LIGHT POLES TO SINGLE LIGHT POLES**

EXISTING VIEW LOOKING WEST ALONG W. JANESVILLE ROAD (STH 24) FROM S. 111 STREET: 1989



POTENTIAL VIEW ALONG W. JANESVILLE ROAD (STH 24) LOOKING WEST FROM S. 111 STREET  
AFTER PROPOSED CONVERSION OF TWO ROWS OF LIGHT POLES TO A SINGLE ROW

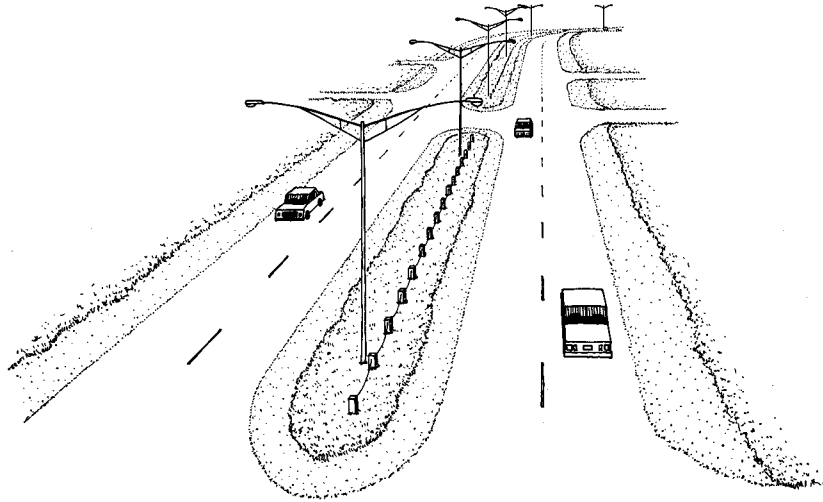


Source: SEWRPC.



Figure 38

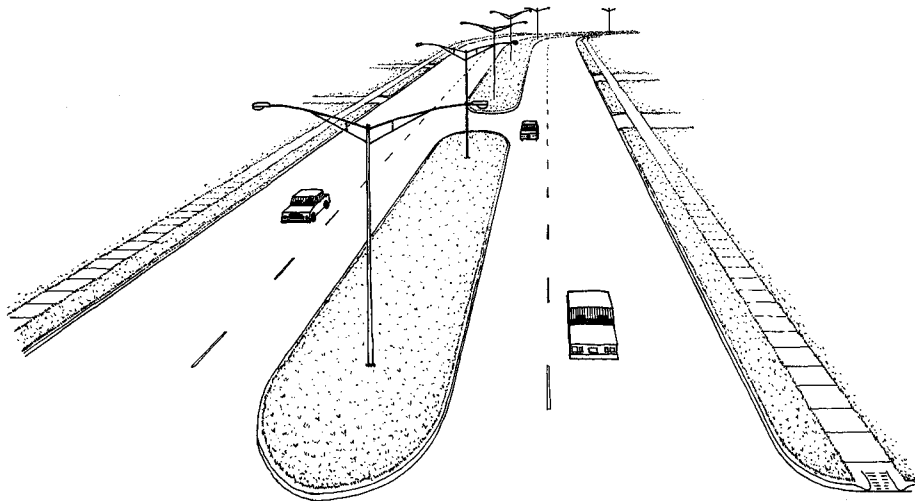
**EXISTING VIEW ALONG W. FOREST HOME AVENUE  
LOOKING NORTHEAST FROM W. KELM ROAD: 1989**



Source: SEWRPC.

Figure 39

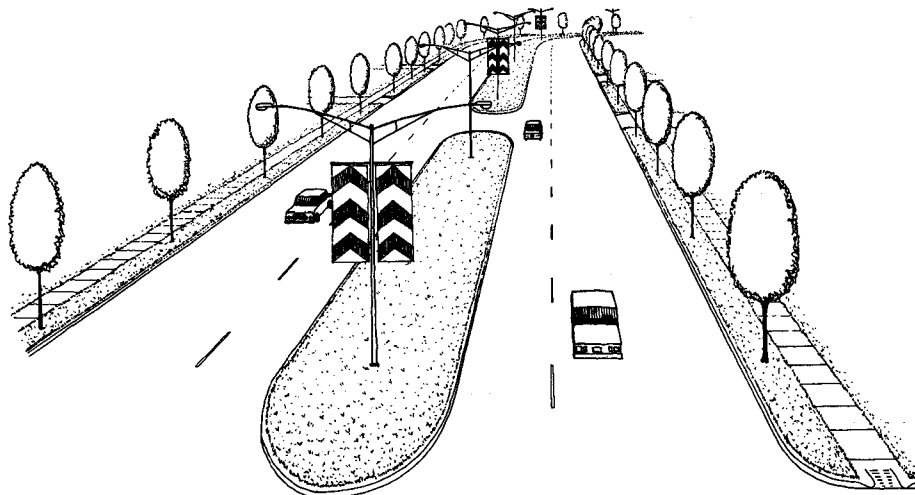
**POTENTIAL VIEW ALONG W. FOREST HOME AVENUE  
LOOKING NORTHEAST FROM W. KELM ROAD ILLUSTRATING  
PARTIAL STREETScape IMPROVEMENTS**



Source: SEWRPC.

Figure 40

**POTENTIAL VIEW ALONG W. FOREST HOME AVENUE  
LOOKING NORTHEAST FROM W. KELM ROAD ILLUSTRATING  
EXTENSIVE STREETScape IMPROVEMENTS**

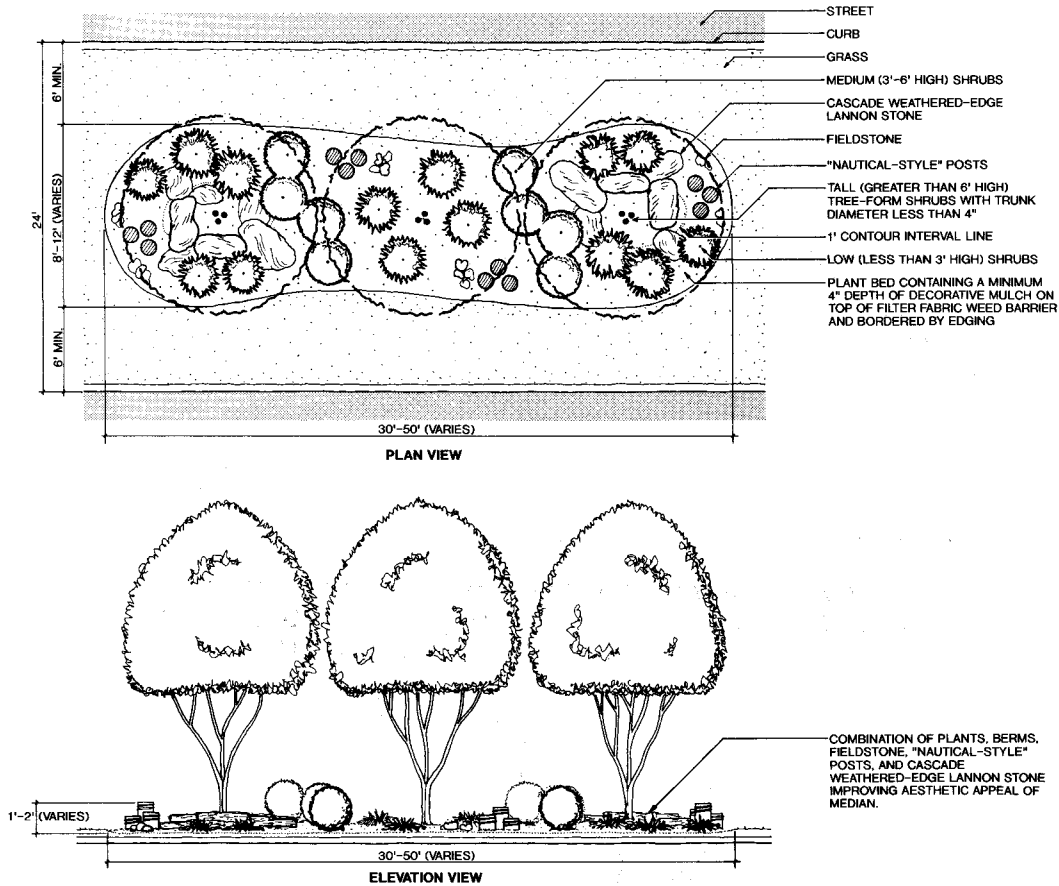


Source: SEWRPC.

Figure 41

# ALTERNATIVE LANDSCAPE BEDS FOR HIGHWAY MEDIANS

## A. LANDSCAPING WITH BERMS, POSTS, STONES, AND PLANTS



## B. LANDSCAPING WITH PLANTERS AND PLANTS

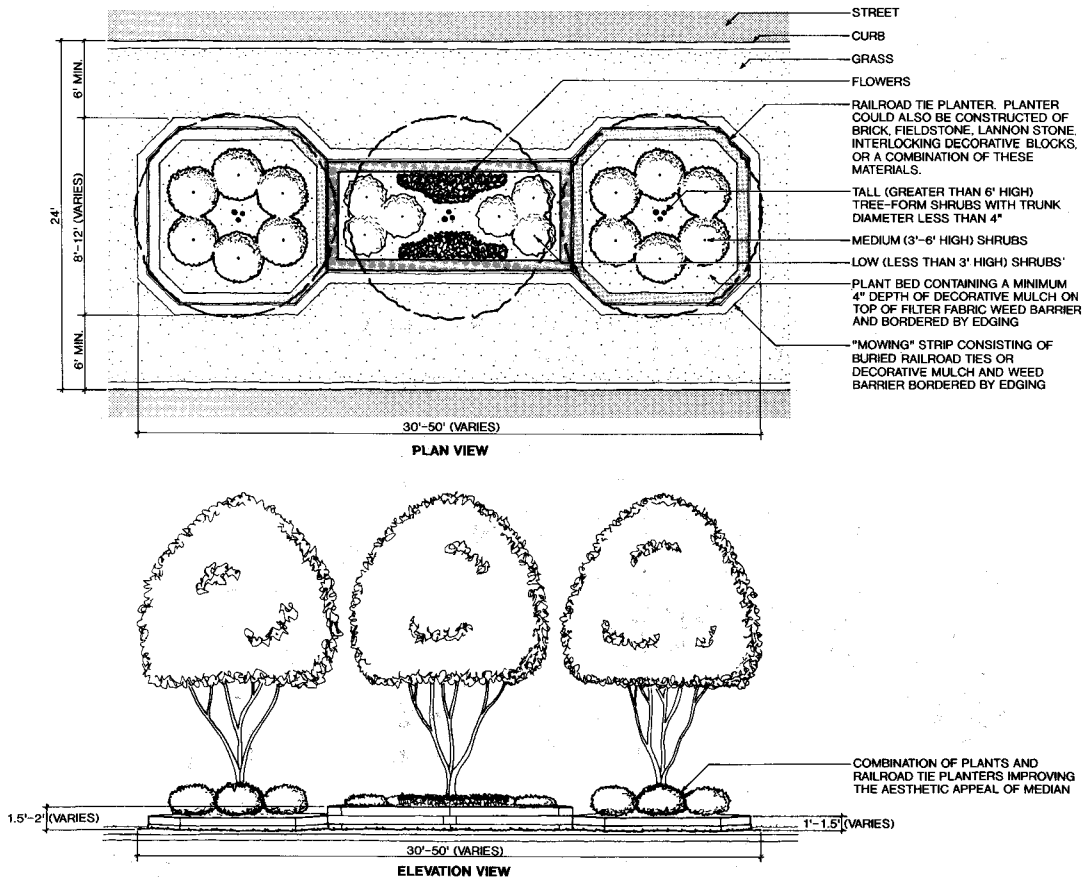
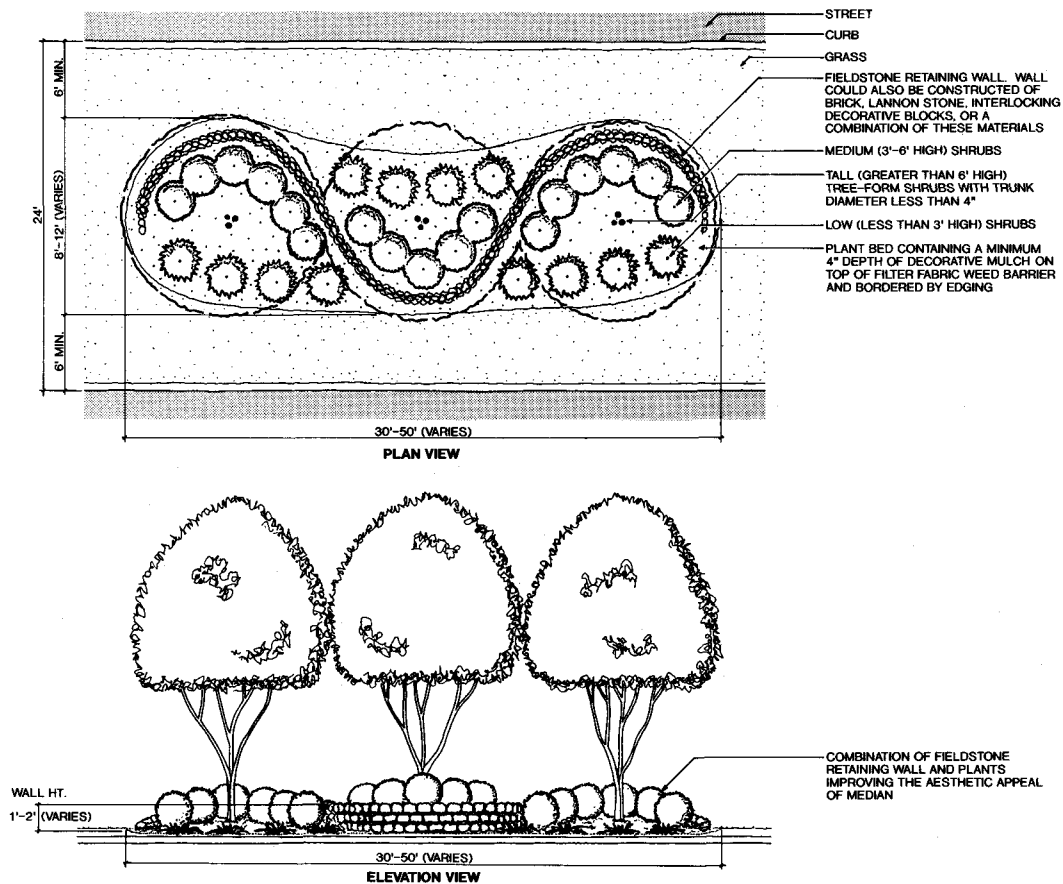


Figure 41 (continued)

C. LANDSCAPING WITH FIELDSTONE WALL AND PLANTS



Source: SEWRPC.

**Parking Lots:** As shown on Map 15 in Chapter II, a large number of parking lots 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 accessory landscape islands in the interior of parking lots and at the end of parking rows; by screening parking lots adjacent to residential areas and lots visible from public streets; by requiring protective curbing around such landscape areas; and by requiring, on some sites, permanent paving. It is important to note that the provision of landscape islands is recommended not only for aesthetic purposes, 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 provides a visual clearance area, 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. Chapter III provides parking lot design standards; Fig-

ures 14 and 23 in this chapter illustrate potential parking lot landscaping.

In some cases, the number of parking spaces provided and the layout of parking lots are inadequate, in other cases, excessive. As noted in Chapter II, too few parking spaces with inadequate dimensions create an inconvenience to tenants or customers and may encourage vehicles to park on public streets, creating a potential traffic hazard. Too many parking spaces with excessively wide traffic aisles represent an inefficient use of lands that could otherwise be converted to attractive landscaped areas. As noted in Chapter II, an examination of parking needs and dimensions of individual lands uses in the study area should be undertaken by the Village to determine precisely where and to what extent changes are required.

**Building Foundation Landscaping:** Map 15 in Chapter II also shows a significant number of commercial and multi-family building elevations visible from public streets and adjacent to

customer and tenant parking lots that do not provide sufficient building foundation landscaping. 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 indicated in the urban design section of Chapter III and illustrated in Figure 26, the plant beds do not necessarily have to be a narrow linear strip located directly against the buildings, but can consist of large plant beds located at or near the dripline of roof overhangs.

**Architectural Compatibility of Buildings:** As noted in Chapter II, a number of existing buildings in the study area contain features that do not complement neighboring buildings. The architectural design criteria established in Chapter III state that although facades of two adjacent buildings may be different, their overall appearance should be made compatible through the proper use of such structural elements as the building shape and proportion, the placement of openings such as doors or windows, the placement of signs, and various other building details. The Village is currently in the process of establishing a set of architectural review guidelines which may become part of its zoning ordinance, allowing public officials to better regulate and inform developers of the desired architectural character the Village wishes to achieve. This, in turn, would assure a degree of architectural compatibility among neighboring structures and yet allow flexibility for creative architectural design.

Appendix A provides general architectural review guidelines that could be applied to the entire Village or to designated arterial corridor districts. As noted in Chapter III, any historic preservation actions should be undertaken in accordance with the standards promulgated by the U. S. Secretary of Interior for all forms of historic preservation, including acquisition, protection, stabilization, preservation, rehabilitation, restoration, and reconstruction of significant historic features, including buildings.

**Buffer and Perimeter Landscape Strips:** The provision of adequate and attractive perimeter landscape strips which may also function as buffer strips along the boundaries of individual sites is lacking within the arterial corridors. Perimeter landscape strips around an entire parcel provides open space for attractive land-

scaping, screening between incompatible land uses, and filtration of stormwater runoff. These strips further define the boundaries of a property and its entrances, thereby preventing vehicles in parking lots from parking on, or backing into, public streets or sidewalks. The land use plan designates where buffer strips should be provided between incompatible land uses, as shown on Map 19. Figure 16 in Chapter III shows alternative landscape plantings that could be provided in these buffer strips. Such landscape strips are not necessary for adjoining sites that share entrances, traffic aisles, and parking lots at a common lot line.

**Vehicular Access Points:** An excessive number of vehicular access points along the study area arterials increases the potential for traffic conflicts and accidents, and decreases the traffic capacity of the streets involved. The distance between driveways along the three major arterial streets should meet the spacing specifications in Table 17 in Chapter III and discussed further in Chapter V. Map 17 illustrates how these access points, driveways and some local streets, could be eliminated along S. 108th Street (STH 100 and USH 45) between W. Edgerton Avenue and Janesville Road by providing service roads as an alternative vehicular route to the land uses located along this segment of the arterial. In addition, Appendix B provides a separate memorandum report entitled SEWRPC Community Assistance Staff Memorandum No. 92-2, A Recommended Access Management Plan for a Portion of the S. 108th Street (STH 100 and USH 45) Corridor between W. Janesville Road (STH 24) and W. Edgerton Avenue in the Village of Hales Corners, May 1992, which also addresses this issue. This report sets forth a recommended detailed access management plan for a portion of S. 108th Street which would be compatible with the land uses recommended on the locally preferred land use plan for this segment of S. 108th Street. The aforementioned plans would provide safer and more convenient access to land uses along the arterials concerned.

**Other Traffic-Related Solutions:** In so far as practicable, the cross-streets of the intersection of W. Grange Avenue and W. Forest Home Avenue and W. Forest Home Avenue and S. 108th Street should intersect at as near a right angle as possible to improve visibility at these intersections. The provision of traffic lights at these intersections will help to abate this problem.



Closing S. 108th Place as a through public street would improve traffic safety where this street currently intersects W. Janesville Road and W. Forest Home Avenue, close to two major intersections where these same arterial streets, W. Janesville Road and W. Forest Home Avenue, intersect with S. 108th Street. Whenever possible, separations at any intersections between arterial streets and paralleling frontage roads should be no less than 150 feet.

The convergence of S. New Berlin Road, S. 116th Street, and W. Godsell Avenue at one intersection creates a dangerous traffic pattern. Figure 42 illustrates two alternative street alignments for alleviating this problem. It is recommended that Alternative "B" be implemented.

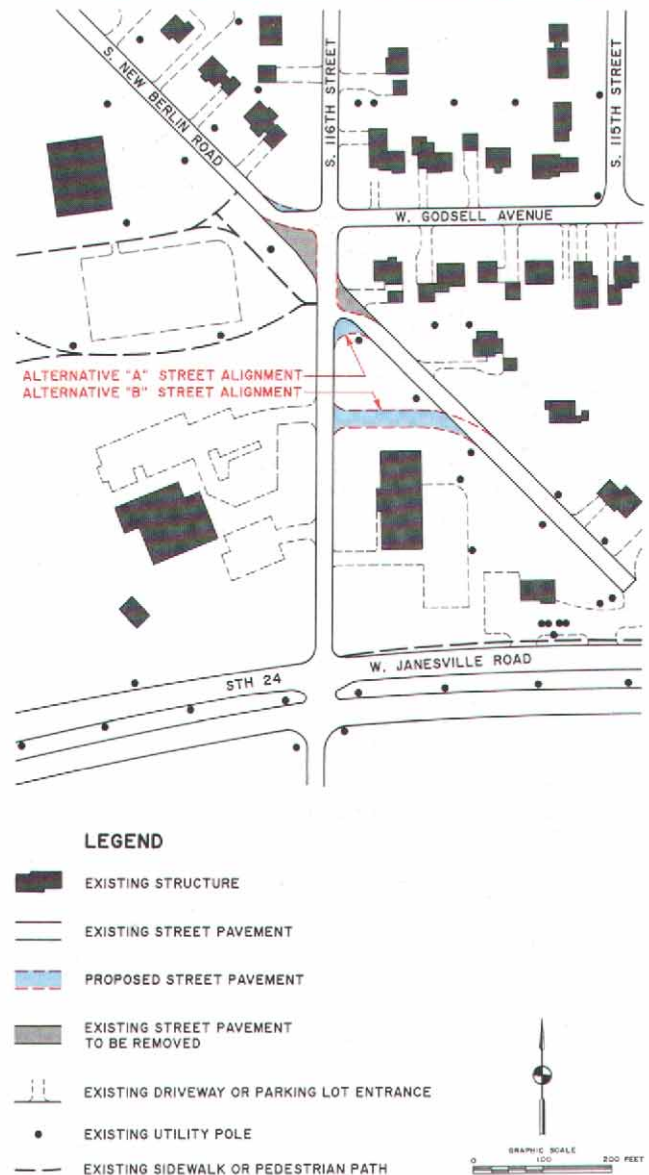
The end of the segment of S. 111th street which connects to the south side of W. Janesville Road should contain a "T" or circular turnaround to provide adequate vehicular turnaround space for general traffic and emergency vehicles. Ideally, the dead ends of all public streets should be provided with circular turnarounds in accordance with Figure 12 in Chapter III.

**Pedestrian and Bicycle Circulation Plan:** Adequate pedestrian crossing measures should be provided at several busy intersections in the study area, as defined on Map 15 in Chapter II, where such provisions are lacking or insufficient. Handicap ramps, pedestrian crossing lights, and crosswalk paving lines at these intersections will improve the pedestrian and bicyclist safety at these intersections. In addition, certain segments of the arterials concerned, as shown in Map 15, have no sidewalks. A minimum five-foot-wide sidewalk should be provided in these locations. The Village should prepare a pedestrian and bicycle circulation system plan to determine where such facilities should be provided throughout the Village. Ultimately, this system plan would provide safe pedestrian and bicycle access to all land uses of neighborhood and communitywide importance, such as schools, parks, the library, and shopping centers.

As noted earlier in this chapter, the locally preferred land use plan recommends that trail-oriented facilities be provided to assist in connecting significant man-made and natural features of the study area for recreational and transportation purposes. These trails would accommodate pedestrians and bicyclists and

Figure 42

**SUGGESTED STREET IMPROVEMENTS TO THE INTERSECTION OF S. NEW BERLIN ROAD, S. 116TH STREET, AND W. GODSELL AVENUE**



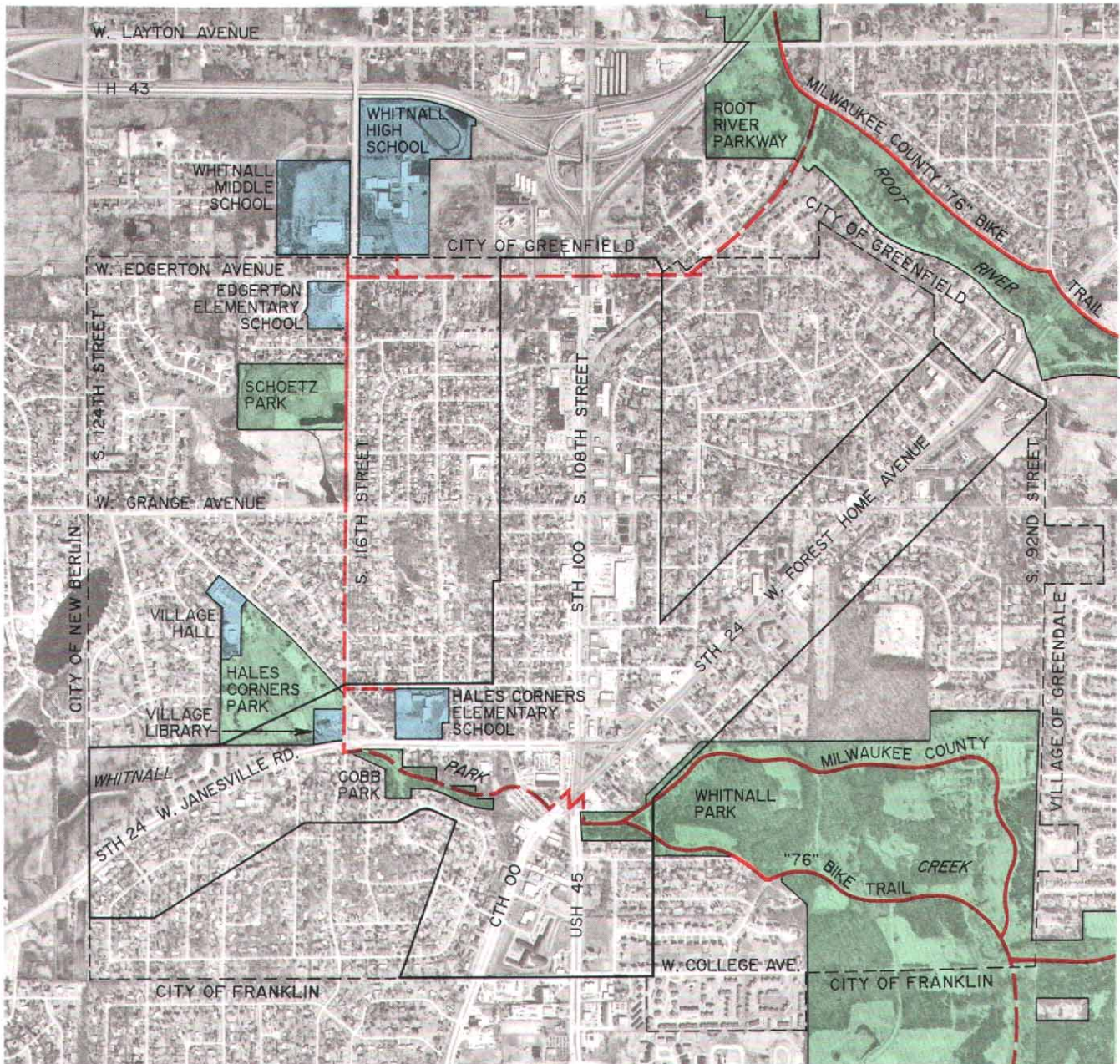
Source: SEWRPC.

serve as recreational facilities and provide safe pedestrian and bicyclist access to public parks and schools in the Hales Corners area. As shown on Map 20, a network of trails is recommended generally traversing the Village along Whitnall Park Creek, linking Whitnall, Cobb, and Hales Corners Parks; along the west side of S. 116th Street, linking Hales Corners Park, Schoetz Park, Edgerton Elementary School, and Whitnall Middle and High Schools; and along the



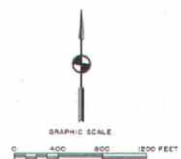
Map 20

RECOMMENDED RECREATION TRAILS IN THE VILLAGE OF HALES CORNERS AND ENVIRONS



LEGEND

- VILLAGE OF HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA BOUNDARY
- VILLAGE OF HALES CORNERS CORPORATE LIMITS
- EXISTING RECREATION TRAIL
- PROPOSED RECREATION TRAIL
- EXISTING SELECTED PUBLIC GOVERNMENTAL AND INSTITUTIONAL USES
- EXISTING PUBLIC PARKS AND PARKWAYS



Source: SEWRPC.

north side of W. Edgerton Avenue and on the Wisconsin Electric Power Company right-of-way. It is envisioned that the this trail system would connect to the existing Milwaukee County Root River Parkway, which includes the Milwaukee County "76 Bike Tour" trail, at two locations northeast and southeast of the Village. Approximately five miles of this trail system would be located in the Village, of which three miles already exist, as shown on Map 20. The Root River Parkway trail is envisioned to be linked by local trail systems surrounding the Hales Corners area to the proposed Fox River Parkway trail at one location northwest of the Village and at two locations southwest of the Village. This interlinking network of local, county, and regional systems would provide the residents of the Village of Hales Corners opportunities for a longer and wider array of trail-oriented facilities for hiking and biking.

#### Positive Attributes

Although the Village has a number of physical problems, it also has certain assets which can be used to improve its character. Whitnall Park Creek, as it extends through existing parks, businesses, and residential areas, should be developed to its full potential as a major environmental and aesthetic resource in the Village. The opportunities for experiencing the creek are

limited. To capitalize on the creek as a valuable resource, a "riverwalk" that would also function as a pedestrian and bicycle path could be constructed along its banks. Such a path would also link the three existing parks, Whitnall, Cobb, and Hales Corners Parks, in the study area.

If the commercial land uses develop in accordance with the locally preferred land use plan, then the businesses along the arterials will establish a reasonably compact core of an identifiable commercial center with adequate and readily available parking space for its clientele. The heavy traffic on the arterials concerned also provides great potential for the community to present a positive image to the passerby. The existing visual elements, such as the landmarks and underutilized triangular landscape island in the center of the Village, can be used to help create a more pleasant environment. Since the major arterials are the "main streets" of the Village, with certain important land uses located along them, an effort should be made to change its highway strip commercial image, with the accompanying negative perceptions of the Village, to one which conveys a more positive image of the Village. This revitalization effort would further instill a sense of community pride in the Hales Corners residents and businesses.

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## Chapter V

### TRANSPORTATION PLAN

#### INTRODUCTION

This chapter presents a transportation plan for the three major arterial street corridors in the Village: S. 108th Street (STH 100 and USH 45), W. Janesville Road (STH 24), and W. Forest Home Avenue (CTH 00/STH 24). Existing physical and operating characteristics of each major arterial roadway are presented in this chapter, along with information on current traffic volume, speed, and accidents. Also presented are year 2010 traffic forecasts for the major arterial corridors. Those segments of the major arterial corridors which currently carry, or may be expected, by the year 2010, to carry, average weekday traffic volumes which exceed their design capacity and thus experience traffic congestion problems are also identified. Those segments of the major arterials in the Village requiring the provision of additional traffic lanes through widening to address current and anticipated traffic congestion and safety problems are identified.

#### EXISTING AND FORECAST CONDITIONS

##### Functional Classification and Jurisdictional Responsibility

The three streets within the Village which are the focus of this chapter are all arterials, whose primary function is the expeditious movement of traffic between various subareas of the Village, between the Village and subareas of Milwaukee and Waukesha Counties, and between the Village and subareas of the Region, of which the Village is an integral part.

West Janesville Road (STH 24), S. 108th Street (STH 100 and USH 45), and W. Forest Home Avenue (STH 24) from its intersection with W. Janesville Road to the north corporate limits of the Village are part of the state trunk highway system; as such they are under the jurisdiction of the State. The State is responsible for the construction, operation, and maintenance of these facilities. West Forest Home Avenue (CTH 00) from the south corporate limits of the Village to its intersection with W. Janesville Road is a county trunk highway. Therefore, Milwaukee County is responsible for the con-

struction, operation, and maintenance of this highway facility.

##### Roadway Physical and Operational Characteristics

West Janesville Road (STH 24) from the west corporate limits of the Village to its intersection with W. Forest Home Avenue (CTH 00) is constructed to a divided urban cross-section. The cross-section of W. Janesville Road generally consists of twin 36-foot-wide pavements, separated by a 28-foot-wide median. Parking is permitted at selected locations on this stretch of W. Janesville Road (STH 24). Auxiliary turning lanes are provided at the intersections of W. Janesville Road with 116th Street and with S. 108th Street (STH 100 and USH 45). Parking is allowed at all times on W. Janesville Road between the west corporate limits of the Village and S. 108th Street (STH 100 and USH 45), with parking restricted to one hour on the north side of W. Janesville Road between S. 108th Place and S. 108th Street.

South 108th Street (STH 100 and USH 45) from the north corporate limits of the Village to its south corporate limits is constructed to a divided urban cross-section. Generally, S. 108th Street (STH 100 and USH 45) from its intersection with W. Forest Home Avenue to the north corporate limits of the Village is developed with twin 36-foot-wide pavements, providing three traffic lanes in each direction, separated by a 28-foot-wide median. South 108th Street (STH 100 and USH 45) from its intersection with W. Forest Home Avenue to the south corporate limits of the Village is developed with twin 40-foot-wide pavements, providing three traffic lanes in each direction, separated by a 28-foot-wide median. Parking along S. 108th Street (STH 100 and USH 45) within the arterial study corridor is prohibited at all times.

West Forest Home Avenue (CTH 00) from the south corporate limits of the Village to its intersection with S. 108th Street (STH 100 and USH 45) is constructed to a rural cross-section consisting of 10-foot-wide gravel shoulders and twin 24-foot-wide pavements, separated by a 20-foot-wide median, providing two traffic lanes in each direction. West Forest Home Avenue

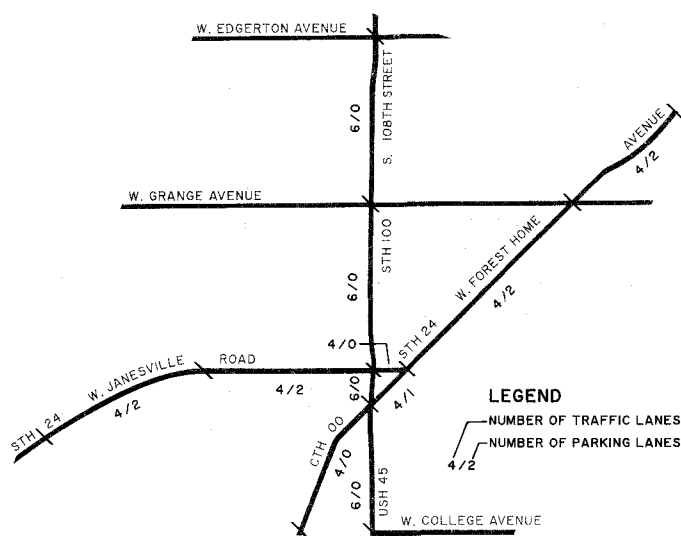
from S. 108th Street (STH 100 and USH 45) to its intersection with W. Janesville Road is constructed to an urban cross-section consisting of curb and gutter and twin 36-foot-wide pavements, separated by a 30-foot-wide median, providing two traffic lanes and a parking lane for eastbound traffic and two traffic lanes for westbound traffic. West Forest Home Avenue (STH 24) between its intersection with Janesville Road and the north corporate limits of the Village is constructed to a divided urban cross-section consisting of twin 36-foot-wide pavements, separated by a 28-foot-wide median. Three traffic lanes are provided in each direction between W. Grange Avenue and the north corporate limits, since parking is prohibited at all times. Parking is permitted at selected locations on both sides of W. Forest Home Avenue (STH 24) between S. 108th Street and W. Grange Avenue, thus generally limiting this stretch of Forest Home Avenue to two traffic lanes in each direction. Shown on Figure 43 are the number of existing traffic lanes and parking lanes on the arterial facilities in the study area together with the design capacity of the facilities.

Traffic on S. 108th Street (STH 100 and USH 45) is controlled by traffic signals at its intersections with W. Edgerton Avenue, W. Grange Avenue, W. Janesville Road, and W. Forest Home Avenue. At the remaining intersections of S. 108th Street with cross streets, traffic on the cross streets is controlled by stop signs. Traffic on W. Janesville Road is traffic-signal controlled at the intersections with S. 116th Street and S. 108th Street (STH 100 and USH 45). At the remaining intersections of W. Janesville Road with cross streets, traffic on the cross streets is controlled by stop signs. Traffic on W. Forest Home Avenue is controlled by traffic signals at the intersection with S. 108th Street (STH 100 and USH 45). Traffic on the cross streets of all other intersections along W. Forest Home Avenue is controlled by stop signs.

At the intersection of W. Forest Home Avenue with W. Janesville Road, eastbound traffic on W. Janesville Road is provided an auxiliary lane in which to merge with eastbound traffic on W. Forest Home Avenue. It is also at this intersection that CTH 00 terminates and STH 24 begins on W. Forest Home Avenue. Traffic on W. Forest Home Avenue is traffic-signal controlled at its intersection with W. Grange Avenue; westbound traffic on

Figure 43

# EXISTING TRAFFIC LANES AND PARKING LANES OF THE ARTERIAL STUDY SEGMENTS: 1990



Source: SEWRPC.

W. Forest Home Avenue at Janesville Road is controlled by stop signs. At the remaining intersections of W. Forest Home Avenue with its cross streets, traffic on the cross streets is stop sign-controlled.

The posted speed limit on all the arterial segments in the study area is 35 miles per hour (mph).

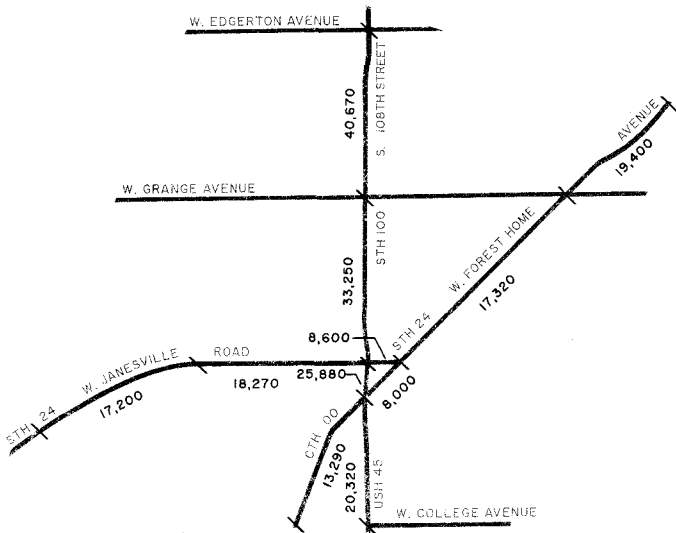
## Existing and Forecast Future Traffic Volumes

As shown on Figure 44, the average weekday traffic volumes on the arterial segments in the study area vary substantially with location. Existing average weekday traffic volumes on the study segments range from approximately 13,000 vehicles per average weekday on W. Forest Home Avenue (CTH 00) to almost 41,000 vehicles per average weekday on the segment of S. 108th Street (STH 100 and USH 45) between its intersections with W. Edgerton Avenue and with W. Grange Avenue. The hourly variation in traffic volume on an average weekday on S. 108th Street (STH 100 and USH 45) at W. Edgerton Avenue is shown on Figure 45. The highest hourly traffic volume occurs in the late afternoon, with other noticeable peaks in the morning and at midday.

The historic growth trends in average weekday traffic volume on the study segments since 1968 are set forth in Table 21. The historic growth

Figure 44

**AVERAGE WEEKDAY TRAFFIC ON THE  
ARTERIAL STUDY SEGMENTS WITHIN THE  
VILLAGE OF HALES CORNERS: 1990<sup>a</sup>**



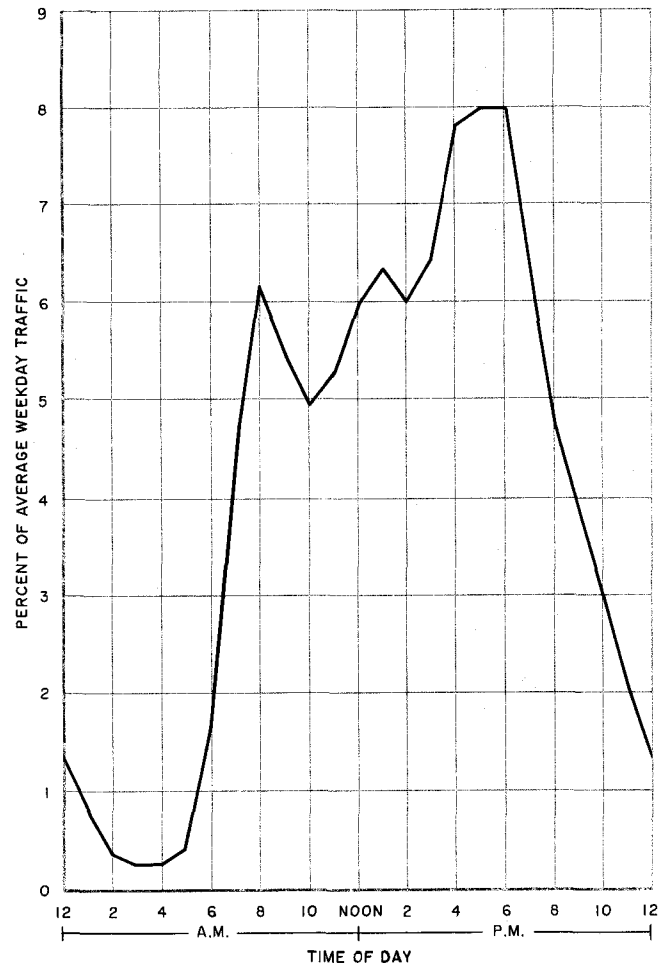
<sup>a</sup>Average weekday traffic volume on STH 100 and USH 45 between W. Edgerton Avenue and W. Grange Avenue is about 7,000 vehicles, or 20 percent greater than the average weekday traffic volume on STH 100 and USH 45 between W. Grange Avenue and W. Janesville Road. Approximately 2,500 of these additional 7,000 vehicles per average weekday may be attributed to vehicle turning movements between STH 100 and USH 45 and W. Grange Avenue. The remainder may be attributed to the land uses between W. Grange Avenue and W. Edgerton Avenue, and the location of IH 43 to the north of this segment of STH 100 and USH 45.

Source: SEWRPC.

trend in traffic volume on S. 108th Street (STH 100 and USH 45) varies along the length of the study segment. The segment of S. 108th Street from W. Forest Home Avenue to the south corporate limits of the Village has shown the greatest rate of increase in average weekday traffic volumes, having increased by approximately 144 percent since 1968, or by about 4.0 percent annually. The average weekday traffic volume on the segments of S. 108th Street north from its intersection with W. Forest Home Avenue to the north corporate limits of the Village have also increased substantially, with the segment between W. Grange Avenue and W. Janesville Road having increased by approximately 138 percent since 1968, or about 3.8 percent annually. Average weekday traffic volume on the remaining study segments has also increased, but at slower rates than the average weekday traffic on S. 108th Street.

Figure 45

**HOURLY VARIATION IN AVERAGE WEEKDAY  
TRAFFIC VOLUME ON S. 108TH STREET (STH 100  
AND USH 45) AT W. EDGERTON AVENUE IN THE  
VILLAGE OF HALES CORNERS: 1990**



Source: Wisconsin Department of Transportation and SEWRPC.

Estimates of through traffic utilizing the study segments are set forth in Table 22. "Through traffic" was defined for this purpose as traffic on the arterials concerned which had neither an origin nor destination within the Village. It should be noted that through trips, or trips with both an origin and destination outside the Village, account for approximately 36 to 87 percent of the total vehicles on the arterial study facilities. Two areas which contribute significantly to the through traffic in the Village are the Cities of Muskego and Franklin. These two cities may be expected to experience continued growth over the next 20 years. Planned year 2010 household and employment levels in the City of Muskego are 6,600 households and

Table 21

## EXISTING WEEKDAY TRAFFIC VOLUMES ON THE STUDY SEGMENTS: 1968-1990

Location	Year									Annual Growth Rate 1968-1990 (percent)
	1968	1970	1972	1975	1978	1981	1984	1987	1990	
S. 108th Street (STH 100 and USH 45)										
W. Edgerton Avenue to W. Grange Avenue . . . . .	19,700	23,490	27,730	25,860	34,740	36,670	35,650	39,180	40,670	3.2
W. Grange Avenue to W. Janesville Road . . . . .	13,990	20,840	24,400	26,850	25,730	27,690	30,810	33,210	33,250	3.8
W. Janesville Road to W. Forest Home Avenue . . . . .	12,570	12,670	16,750	16,120	21,160	20,960	22,190	25,970	25,880	3.2
W. Forest Home Avenue to W. College Avenue . . . . .	8,320	9,980	11,750	10,550	12,870	14,710	15,180	20,010	20,320	4.0
W. Janesville Road (STH 24)										
S. 122nd Street to S. 116th Street . . . . .	11,710	10,490	14,560	13,850	17,690	15,710	17,710	17,170	17,200	1.7
S. 116th Street to S. 108th Street . . . . .	13,050	13,450	16,610	16,220	18,710	17,850	18,780	18,520	18,270	1.5
S. 108th Street to W. Forest Home Avenue . . . . .	7,020	7,730	8,540	9,270	8,660	8,110	8,520	8,040	8,600	0.9
W. Forest Home Avenue (CTH 00)										
South Corporate Limits to S. 108th Street . . . . .	9,660	10,500	11,510	10,190	12,750	11,070	11,650	12,220	13,290	1.4
S. 108th Street to W. Janesville Road . . . . .	5,020	6,130	6,070	6,690	7,430	7,760	8,370	8,560	11,070	3.5
W. Forest Home Avenue (STH 24)										
W. Janesville Road to W. Grange Avenue . . . . .	11,560	13,120	15,390	14,240	17,060	16,010	16,220	15,810	17,320	1.8
W. Grange Avenue to Root River Parkway . . . . .	11,940	11,880	14,140	13,480	17,500	16,100	18,900	19,450	19,400	2.1

Source: Wisconsin Department of Transportation.

Table 22

## ESTIMATE OF EXISTING THROUGH TRAFFIC TRAVELING WITHIN THE ARTERIAL STUDY CORRIDOR: 1987

Location	Through Traffic <sup>a</sup>	Percent of Total Traffic
S. 108th Street (STH 100 and USH 45)		
W. Janesville Road to W. Edgerton Avenue . . . . .	17,600	45.0
W. Janesville Road to South Corporate Limits . . . . .	7,300	36.5
W. Janesville Road (STH 24)		
West Corporate Limits to S. 108th Street . . . . .	10,400	60.5
W. Forest Home Avenue (CTH 00)		
South Corporate Limits to S. 108th Street . . . . .	10,680	87.4
W. Forest Home Avenue (STH 24)		
W. Janesville Road to Root River Parkway . . . . .	7,300	37.6

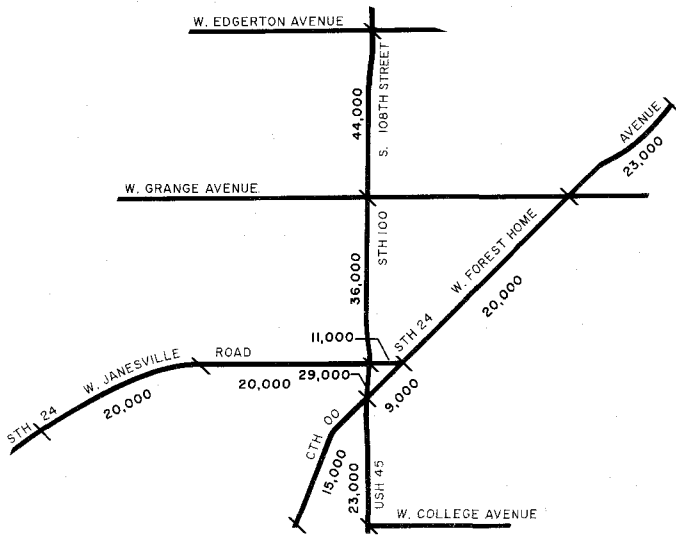
<sup>a</sup>For the purposes of this study, through traffic is defined as that traffic which has both ends, both trip origin and trip destination, outside the Village of Hales Corners. Trips with both ends or one end within the Village were not considered through traffic.

Source: SEWRPC.



Figure 46

**FORECAST DESIGN YEAR 2010  
AVERAGE WEEKDAY TRAFFIC VOLUMES**



Source: SEWRPC.

4,900 jobs, representing increases of about 40 and 55 percent, respectively, over current levels. Planned year 2010 household and employment levels in the City of Franklin are 11,700 households and 7,500 jobs, representing increases of about 62 and 70 percent, respectively, over current levels.

Forecast design year 2010 traffic volumes for the arterial segments studied were prepared by the Regional Planning Commission and are set forth in Figure 46. The traffic forecasts are based upon, and assume implementation of, the adopted regional transportation system plan, the year 2010 regional land use plan, and the forecast design year 2010 regional resident population, employment, and household levels upon which those plans have been developed. The adopted regional transportation system plan recommends the substantial improvement and expansion of public transit service, including the development of a true regionwide rapid transit system. Under the plan, the amount of transit service provided and the average speed of a transit trip would nearly double and correspondingly the proportion of travel within the Region made by public transit rather than by automobile may be expected to double. Transit service to the Village of Hales Corners is recommended to be improved substantially through the provision of expanded local and

freeway flyer bus service and the introduction of limited-stop express bus service on reserved street lanes.

The regional plan also recommends transportation system management actions to promote more efficient use of arterial street and highway facilities by promoting carpooling and public transit use.

The regional plan also recommends the substantial improvement and expansion of the regional arterial street and highway system. A recommended arterial highway improvement which may be expected to reduce traffic on some of the arterial study segments by about 2,000 vehicles per average weekday by the year 2010 on S. 108th Street is the long planned extension of Moorland Road from Grange Avenue to Janesville Road (CTH L). There are no recommended improvements in the adopted regional plan which propose widening to provide additional traffic lanes on the study arterial segments. Prohibition of parking is recommended on W. Forest Home Avenue (STH 24) between W. Janesville Road (STH 24) and the north corporate limits of the Village as future traffic volumes approach the design capacity of the existing four traffic lanes. It should be noted that if the regional transportation system plan is not implemented by the year 2010, and implementation of the plan is currently behind schedule, average weekday traffic volumes in the year 2010 on the study arterial segments may be substantially, about 20 percent, higher than those forecast.

#### Roadway Capacity

The number of traffic lanes on an arterial facility largely, although not entirely, determines its traffic-carrying capacity. A two-lane urban arterial generally has a design capacity of about 13,000 vehicles per average weekday; a four-lane divided urban arterial has a design capacity of about 25,000 vehicles per average weekday; and a six-lane divided arterial has a design capacity of about 35,000 vehicles per average weekday. Also affecting urban arterial design capacity are the characteristics of intersections, including intersection approach pavement width, provision of exclusive left-turn lanes, parking within 200 feet of the intersection, type of traffic control, the percentage of left-and right-turning vehicles at the intersection, and the percentage of trucks and buses in the traffic

streams. State Trunk Highway 100 and USH 45 in the Village has a design capacity of about 35,000 vehicles per average weekday; W. Forest Home Avenue and W. Janesville Road in the Village have design capacities of about 25,000 vehicles per average weekday.

Urban arterials carrying average weekday traffic volumes exceeding design capacity may be expected to experience significant delays at controlled intersections, reduced speeds between intersections, and increased accident rates. The reduced speeds and intersection delays on urban arterials carrying average weekday traffic volumes equaling or exceeding their design capacity will generally occur only during the morning and evening peak traffic hours and, in some cases, at midday. During evening and early morning hours there will generally be little, if any, traffic congestion and delay. Also, on most urban arterial streets, weekend traffic peaks will generally be less than weekday traffic peaks.<sup>1</sup>

Typically, vehicles using arterials carrying traffic volumes substantially exceeding design capacity will experience delays of about 35 seconds at signalized intersections during peak traffic periods, with delays to some vehicles of up to 120 seconds. Vehicles may have to wait through more than one traffic signal red phase to clear the intersection, particularly left-turning vehicles. Also, between controlled intersections, arterials carrying traffic volumes greater than design capacity may be expected to experience restrictions on operating speed and on the ability of vehicles to maneuver. Travel times on such arterials may typically increase by one-third over the average travel times on uncongested facilities.

Vehicles using arterials carrying traffic volumes equal to or approaching design capacity typically experience vehicle delays at signalized intersections during peak traffic periods of from 20 to 30 seconds, with delays to some vehicles approaching 90 seconds. The average travel

times on such arterials may typically increase by up to one-third over the average travel times on uncongested facilities.

Vehicles using arterials operating at or under design capacity will experience little vehicle backup at signalized intersections; no vehicles will have to wait through more than one red traffic signal phase. The average delay to vehicles at signalized intersections will typically range from five to 15 seconds.

#### Existing and Forecast Future Traffic Congestion on Study Arterial Segments in Hales Corners

The 1990 average weekday traffic volumes and forecast design year 2010 traffic volumes on the study arterial segments were compared to the existing design capacity of the respective arterial facilities on the basis of the number of traffic lanes currently provided, as shown in Figure 47. Using this comparison, the segment of S. 108th Street (STH 100 and USH 45) between W. Grange Avenue and the north corporate limits of the Village currently carries average weekday traffic volumes which exceed its design capacity. Also, the segment of S. 108th Street between W. Janesville Road (STH 24) and W. Grange Avenue currently carries average weekday traffic volumes approaching its design capacity, that is, within about 10 percent of design capacity. The current average weekday traffic volumes on the other study arterial segments are below the design capacities of the respective roadway segments.

Forecast design year 2010 average weekday traffic volumes may be expected to exceed the existing design capacity of S. 108th Street (STH 100 and USH 45) between W. Janesville Road (STH 24) and the north corporate limits of the Village. Forecast design year 2010 average weekday traffic volumes may be expected to remain below the design capacity of the other arterial segments within the Village.

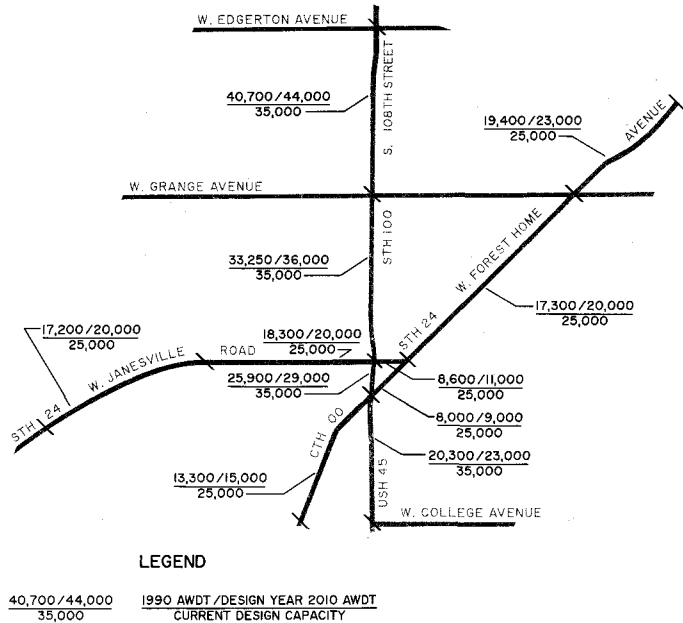
The existing and forecast traffic congestion on S. 108th Street (STH 100 and USH 45) between the north corporate limits of the Village and Janesville Road (STH 24) may be attributed to land development in the area contributing traffic to S. 108th Street exceeding levels anticipated under the adopted year 2000 regional land use plan. In particular, retail land use development has exceeded planned levels. Such development generally generates more traffic, between 100 and 800 percent more, than other land uses.

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<sup>1</sup>The definition of average weekday design capacity is based upon the peak traffic hour and period capacity of a roadway and the percentage of total average weekday traffic volume typically carried during the peak traffic hour and period on the roadway.

Figure 47

**COMPARISON OF EXISTING AND FORECAST  
DESIGN YEAR 2010 AVERAGE WEEKDAY TRAFFIC  
VOLUMES TO THE DESIGN CAPACITY OF THE  
ARTERIAL STREET AND HIGHWAY SYSTEM UNDER  
EXISTING OPERATING CONDITIONS: 1990**



Source: SEWRPC.

### Operating Speeds

In September 1990 the Regional Planning Commission staff observed and recorded vehicle speeds at locations on S. 108th Street (STH 100 and USH 45), W. Janesville Road (STH 24), and W. Forest Home Avenue (CTH 00/STH 24) during the off-peak hours of 1:00 p.m. to 3:30 p.m.<sup>2</sup> Such observation of vehicle speeds, or spot speed study, is useful in determining certain operational characteristics of the traffic stream. One of these operational characteristics is the "85th-percentile speed." The 85th-percentile speed is the speed at, or below, which 85 percent of the observed traffic is traveling on a facility;

<sup>2</sup>The traffic signals along STH 100 and USH 45 were coordinated at the time of the speed study, permitting motorists to proceed along S. 108th Street without stopping at traffic-signal controlled intersections. The coordination of traffic signals has not been modified since the speed study was completed.

it is considered to be the speed deemed safe and reasonable for a facility by the motorists using it.

Another indication of the operation of the traffic stream is the "10 miles per hour pace range." The 10 mph pace range is the 10 mph increment of speed range which includes the largest percentage of vehicles. The greater the percentage of motorists within the 10 mph range of speeds, the less differential between the speeds of vehicles within the traffic stream. It is desirable that the speed differentials between vehicles be minimized, because studies have shown that both the frequency and severity of accidents are minimized when all vehicles travel at approximately equal speeds.

Shown in Table 23 are the speeds recorded by direction at each survey site. The average travel speed on S. 108th Street (STH 100 and USH 45) north of W. Janesville Road (STH 24) for both northbound and southbound traffic is 33.9 mph, or slightly lower than the posted 35 mph speed limit. The 85th-percentile speed was measured to be 38.4 mph; the 10 mph pace range was 30 mph to 39 mph, with almost 70 percent of the traffic travelling within this range. Vehicle speeds were also recorded on S. 108th Street south of its intersection with W. Forest Home Avenue (CTH 00). The speed limit on this segment of S. 108th Street is also 35 mph. The observed average travel speed of this traffic was 34.8 mph; the 85th-percentile speed was 42.8 mph. The 10 mph pace range was 30 mph to 39 mph, with only about 47 percent of the traffic travelling within this range, indicating wide disparity in travel speeds. This is the only segment of the arterials under study which may be considered to have a speeding problem.

The spot speed study conducted on W. Janesville Road (STH 24) indicated that the average vehicle speed of both the eastbound and westbound traffic was 35.3 mph, or approximately at the posted 35 mph speed limit. The 85th-percentile speed was 39.2 mph and the 10 mph pace range was 30 mph to 39 mph, with almost 75 percent of the traffic travelling within this speed range.

The average vehicle speed of traffic on W. Forest Home Avenue (CTH 00) south of its intersection with S. 108th Street (STH 100 and USH 45) was 36.5 mph, or just slightly over the posted 35 mph speed limit. The 85th-percentile speed was measured at 40.6 mph and the 10 mph pace

Table 23

## VEHICLE SPEED BY DIRECTION WITHIN THE ARTERIAL STUDY CORRIDOR: 1990

Location	Average <sup>a</sup> Speed	85th <sup>a</sup> Percentile Speed	10 Mile per Hour Speed	Percentage of Traffic Traveling within the Pace Range
S. 108th Street (STH 100 and USH 45) North of W. Janesville Road (STH 24)				
Northbound .....	34.1	39.1	30-39	66.4
Southbound .....	34.7	38.6	30-39	75.7
S. 108th Street (STH 100 and USH 45) South of W. Forest Home Avenue (CTH 00)				
Northbound .....	33.4	41.8	26-35	43.6
Southbound .....	36.3	43.4	30-39	54.6
W. Janesville Road (STH 24) West of S. 108th Street (STH 100 and USH 45)				
Eastbound .....	33.5	37.0	28-37	79.8
Westbound .....	37.3	40.8	34-43	84.2
W. Forest Home Avenue (CTH 00) Southwest of S. 108th Street (STH 100 and USH 45)				
Eastbound .....	36.1	40.4	30-39	75.6
Westbound .....	36.9	40.8	32-41	79.1
W. Forest Home Avenue (STH 24) Northeast of Its Intersection with W. Janesville Road (STH 24)				
Eastbound .....	34.2	38.4	30-39	67.9
Westbound .....	33.1	36.9	28-37	77.2

<sup>a</sup>In miles per hour.

Source: SEWRPC.

range was 32 mph to 41 mph, with over 76 percent of the traffic travelling within this speed range. The average travel speed of traffic on W. Forest Home Avenue (STH 24) northeast of its intersection with W. Janesville Road (also STH 24) was 33.6 mph, somewhat lower than the posted 35 mph speed limit. The 85th-percentile speed was 37.9 mph and the 10 mph pace range was 29 mph to 38 mph, with almost 71 percent of the traffic travelling within this range.

#### Traffic Accidents

The incidence and location of traffic accidents provides another important measure of the efficiency and operating characteristics of arterial facilities such as S. 108th Street (STH 100 and USH 45), W. Janesville Road (STH 24), and W. Forest Home Avenue (CTH 00/STH 24). A three-year motor vehicle accident history at intersections along the arterial segments is provided in Table 24 and data on midblock

accidents are provided in Table 25. In the three-year study history, 534 accidents occurred on the arterials; 156 accidents occurred in 1988, 175 in 1989, and 203 accidents occurred in 1990. Three hundred ninety-nine accidents, or approximately 75 percent of the total accidents, occurred at intersections within the arterial corridor study area, while the remaining 135 accidents, or approximately 25 percent of the total accidents, occurred at midblock locations.

Accident severity is also an important indicator of the operating characteristics of a roadway. In the three-year study history, only one accident resulted in a fatality; but 163 accidents, or approximately 31 percent of the total accidents, resulted in injuries. Forty-one accidents in 1988 involved injuries; 62 in 1989; and 60 in 1990.

There were 399 intersection accidents in the three-year accident history. The intersections



Table 24

**INCIDENCE AND SEVERITY OF MOTOR VEHICLE ACCIDENTS AT INTERSECTIONS  
WITHIN THE ARTERIAL STUDY CORRIDOR: SEPTEMBER 1987-SEPTEMBER 1990**

Intersection	September 1987 through September 1988			September 1988 through September 1989			September 1989 through September 1990			Three-Year Total		
	Injury	Property Damage	Total	Injury	Property Damage	Total	Injury	Property Damage	Total	Injury	Property Damage	Total
<b>S. 108th Street (STH 100 and USH 45)</b>												
W. Edgerton Avenue .....	6	5	11	6	9	15	5	5	10	17	19	36
W. Abbott Avenue .....	2	7	9	3	3	6	--	4	4	5	14	19
W. Ridge Road .....	2	3	5	2	--	2	1	6	7	5	9	14
W. Copeland Avenue .....	1	--	1	2	4	6	1	2	3	4	6	10
W. Luther Avenue .....	3	3	6	1	4	5	1	5	6	5	12	17
W. Grange Avenue .....	5	15	20	9	17	26	9	19	28	23	51	74
W. Cobb Avenue .....	--	--	--	--	--	--	1	--	1	1	--	1
W. Denis Avenue .....	1	--	1	--	1	1	--	--	--	1	1	2
W. Rockne Avenue .....	1	2	3	1	2	3	2	1	3	4	5	9
W. Liberty Avenue .....	--	1	1	--	--	--	--	2	2	--	3	3
W. Parnell Avenue .....	--	2	2	--	1	1	4	7	11	4	10	14
W. Green Avenue .....	--	--	--	--	--	--	--	1	1	--	1	1
W. Scharles Avenue .....	--	1	1	--	2	2	--	--	--	--	3	3
W. Godsell Avenue .....	--	2	2	--	1	1	3	10	13	3	13	16
W. Janesville Road (STH 24) .....	4	11	15	3	10	13	11	18	29	18	39	57
W. Forest Home Avenue (CTH 00) .....	1	4	5	2	--	2	--	1	1	3	5	8
Whitnall Park Drive .....	--	--	--	--	1	1	--	2	2	--	3	3
W. Kay Parkway .....	1	1	2	--	--	--	1	1	2	2	2	4
W. Kelm Road .....	--	1	1	1 <sup>a</sup>	--	1	--	--	--	1 <sup>a</sup>	1	2
W. College Avenue .....	--	1	1	2	4	6	1	--	1	3	5	8
<b>W. Janesville Road (STH 24)</b>												
122nd Street .....	--	--	--	--	2	2	--	--	--	--	2	2
Kurtz Road .....	--	--	--	2	--	2	1	1	2	3	1	4
S. 118th Street .....	1	--	1	--	--	--	--	3	3	1	3	4
S. 116th Street .....	1	8	9	2	2	4	--	2	2	3	12	15
S. 112th Street .....	--	--	--	--	1	1	1	--	1	1	1	2
S. 111th Street .....	--	--	--	--	1	1	--	--	--	--	1	1
S. 109th Street .....	--	1	1	--	--	--	--	--	--	--	1	1
S. 108th Place .....	--	1	1	--	--	--	--	4	4	--	5	5
<b>W. Forest Home Avenue (CTH 00/STH 24)</b>												
Haleco Lane .....	--	1	1	--	--	--	--	--	--	--	1	1
W. Kelm Road .....	--	1	1	--	1	1	--	--	--	--	2	2
S. 108th Place .....	1	--	1	2	--	2	--	--	--	3	--	3
Lilac Lane .....	2	10	12	9	6	15	2	--	2	13	16	29
W. Janesville Road (STH 24) .....	--	--	--	--	2	2	1	2	3	1	4	5
W. Scharles Avenue .....	--	4	4	2	4	6	4	4	8	6	12	18
W. Grange Avenue .....	1	--	1	--	--	--	--	1	1	1	1	2
W. Ridge Road .....	--	--	--	--	--	--	--	--	--	--	--	--
Old Forest Home Avenue .....	--	--	--	--	--	--	--	--	--	--	--	--
<b>Total</b>	<b>33</b>	<b>86</b>	<b>119</b>	<b>49</b>	<b>79</b>	<b>128</b>	<b>49</b>	<b>103</b>	<b>152</b>	<b>131</b>	<b>268</b>	<b>399</b>

<sup>a</sup>This accident resulted in a fatality.

Source: SEWRPC.

within the arterial corridor study area experiencing the most accidents during the three-year period were: 1) the intersection of S. 108th Street (STH 100 and USH 45) and W. Grange Avenue, with 74 accidents, or approximately 18 percent of the total intersection accidents, 2) the intersection of S. 108th Street (STH 100 and USH 45) and W. Janesville Road (STH 24), with 57 accidents, or about 14 percent of the total intersection accidents, 3) the intersection of S. 108th Street (STH 100 and USH 45) and W. Edgerton

Avenue, with 36 accidents, or about 9 percent of the total intersection accidents, and 4) the intersection of W. Janesville Road (STH 24) and W. Forest Home Avenue (CTH 00), with 29 accidents, or about 7 percent of the total intersection accidents. The number of accidents which occurred during the three-year period at the intersection of S. 108th Street (STH 100 and USH 45) and W. Grange Avenue increased modestly. The number of accidents in 1990 increased dramatically at the intersection of S. 108th

Table 25

**INCIDENCE AND SEVERITY OF MOTOR VEHICLE ACCIDENTS AT MIDBLOCK  
LOCATIONS WITHIN THE ARTERIAL STUDY CORRIDOR: SEPTEMBER 1988-SEPTEMBER 1990**

Midblock Location	September 1987 through September 1988			September 1988 through September 1989			September 1989 through September 1990			Three-Year Total		
	Injury	Property Damage	Total	Injury	Property Damage	Total	Injury	Property Damage	Total	Injury	Property Damage	Total
S. 108th Street (STH 100 and USH 45) Between North Corporate Limits of Village and W. Grange Avenue . . . .	1	12	13	6	17	23	5	15	20	12	44	56
Between W. Grange Avenue and W. Janesville Road (STH 24) . . . . .	3	6	9	5	8	13	3	12	15	11	26	37
Between W. Janesville Road (STH 24) and South Corporate Limits . . . . .	--	1	1	--	3	3	--	1	1	--	5	5
W. Janesville Road (STH 24) Between West Corporate Limits and W. Forest Home Avenue (CTH OO) . . .	--	2	2	--	2	2	1	8	9	1	12	13
W. Forest Home Avenue (CTH OO/STH 24) Between South Corporate Limits of Village and S. 108th Street (STH 100 and USH 45) . . . . .	--	4	4	--	3	3	--	--	--	--	7	7
Between S. 108th Street (STH 100 and USH 45) and East Corporate Limits . . .	4	4	8	2	1	3	2	4	6	8	9	17
<b>Total</b>	<b>8</b>	<b>29</b>	<b>37</b>	<b>13</b>	<b>34</b>	<b>47</b>	<b>11</b>	<b>40</b>	<b>51</b>	<b>32</b>	<b>103</b>	<b>135</b>

Source: SEWRPC.

Street (STH 100 and USH 45) and W. Janesville Road (STH 24) compared to the previous two years. The incidence of accidents at the intersections of S. 108th Street (STH 100 and USH 45) and W. Edgerton Avenue and at W. Janesville Road (STH 24) and W. Forest Home Avenue (CTH OO) and the other intersections has been about the same or slowly declining over the three-year accident history.

Of the 534 accidents which occurred in the three-year history, 135 accidents occurred at midblock locations. As shown in Table 25, the number of accidents which occurred at midblock locations is increasing. In 1988 there were 37 midblock accidents, in 1989 there were 47 midblock accidents and 51 accidents occurred at midblock locations in 1990. The largest number of midblock accidents occurred on the segment of S. 108th Street (STH 100 and USH 45) between the north corporate limits of the Village and W. Grange Avenue. Within this segment of S. 108th Street 13 accidents occurred in 1988, 23 accidents in 1989, and 20 in 1990. On the segment of S. 108th Street between W. Grange Avenue and W. Janesville Road (STH 24) traffic accidents show a similar upward numerical trend, increasing from nine accidents in 1988 to 13 accidents in 1989 and 15 accidents in 1990.

Another measure used to identify accident problem locations is the accident rate at intersections and midblock. The accident rate at intersections considers not only the frequency of accidents, but also the volume of traffic entering an intersection. At the intersection of S. 108th Street (STH 100 and USH 45) and W. Janesville Road (STH 24) the intersection accident rate in 1988 was 1.1 accidents per million vehicles entering the intersection. This rate increased significantly, to 2.2 accidents per million vehicles entering the intersection, in 1990. At the arterial intersection of S. 108th Street and W. Forest Home Avenue, the annual intersection accident rate over the last three years has declined, or increased modestly, as shown in Table 26.

Midblock accident rates consider the frequency of accidents, number of vehicles travelling the segment, and the segment length. The highest annual midblock accident rate was in 1989, with 369 accidents per 100 million vehicle miles of travel on S. 108th Street (STH 100 and USH 45) between W. Edgerton Avenue and W. Grange Avenue. In 1990 this accident rate decreased to 317 accidents per 100 million vehicle miles of travel. The midblock accident rate on the segment of S. 108th Street (STH 100 and USH 45)

Table 26

**INTERSECTION ACCIDENT RATES PER MILLION VEHICLES  
ENTERING THE INTERSECTION: SEPTEMBER 1987-SEPTEMBER 1990**

Intersection	September 1987 through September 1988	September 1988 through September 1989	September 1989 through September 1990
S. 108th Street (STH 100 and USH 45)			
W. Edgerton Avenue .....	0.8	1.1	0.7
W. Grange Avenue .....	1.5	1.9	2.0
W. Janesville Road (STH 24) .....	1.1	1.0	2.2
W. Forest Home Avenue (CTH OO) ...	0.5	0.2	0.1

Source: SEWRPC.

Table 27

**MIDBLOCK ACCIDENT RATES PER 100 MILLION MILES OF TRAVEL  
WITHIN THE ARTERIAL STUDY CORRIDOR: SEPTEMBER 1987-SEPTEMBER 1990**

Location	September 1987 through September 1988	September 1988 through September 1989	September 1989 through September 1990
S. 108th Street (STH 100 and USH 45)			
W. Edgerton Avenue to W. Grange Avenue .....	211.4	369.4	317.3
W. Grange Avenue to W. Janesville Road (STH 24) .....	174.8	252.3	291.1
W. Janesville Road (STH 24) to W. College Avenue .....	28.6	85.6	28.4
W. Janesville Road (STH 24) S. 122nd Street to S. 108th Street (STH 100 and USH 45) .....	30.2	30.2	136.4
W. Forest Home Avenue (CTH OO/STH 24) South Corporate Limits of S. 108th Street (STH 100 and USH 45) .....	277.9	166.3	0.0
S. 108th Street (STH 100 and USH 45) to Root River Parkway .....	103.1	38.2	75.3

Source: SEWRPC.

between W. Grange Avenue and W. Janesville Road (STH 24) exhibited an increase. In 1988 the midblock rate was 175 accidents per 100 million miles of travel. In 1990 the rate was 291 accidents per 100 million miles of travel. The midblock accident rates on the remaining study segments are set forth in Table 27.

Considering both intersection and midblock accidents, the September 1989 through September 1990 total accident rate for STH 100 and USH 45 is 798 accidents per million vehicle miles of travel; for Forest Home Avenue, 301 accidents per million vehicle miles of travel; and for Janesville Road, 293 accidents per million vehicle miles of travel. The statewide average for urban multi-lane divided state trunk highway

standard arterials is 501 accidents per hundred million vehicle miles of travel for facilities carrying average weekday traffic volumes between 24,000 and 40,000, such as STH 100 and USH 45. Similarly, for facilities carrying between 8,000 and 15,999, or between 16,000 and 23,999 vehicles per average weekday, respectively, the statewide average accident rates are 431 and 462 accidents per 100 million vehicle miles of travel.

#### Driveway and Median Inventory

Access to the land along the study arterials is provided by means of both intersections with local streets and intersecting driveways. The average distance between adjacent driveways along the east and west sides of S. 108th Street

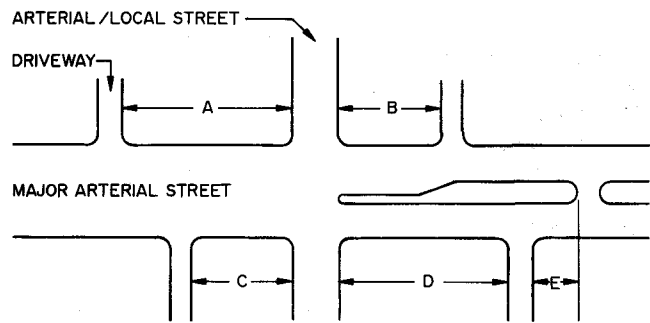
(STH 100 and USH 45) currently is 187 feet and 90 feet, respectively, with the driveway separations varying between 10 and 400 feet. On W. Janesville Road (STH 24) the average spacing between adjacent driveways along the north and south sides of the roadway is approximately 145 feet, and 90 feet, respectively, with the separations varying between 10 and 580 feet. On W. Forest Home Avenue (CTH 00/STH 24) the average spacing between adjacent driveways is 93 feet, and 134 feet for the driveways located on the north and south sides of the roadway, respectively, and driveway spacing ranges between 10 and 620 feet.

Inadequate driveway spacing can have a detrimental effect on the operational characteristics of a roadway, including an increase in traffic accidents and a reduction in roadway capacity. Driveways in effect create additional intersections and increase the complexity of driving. The recommended minimum spacing between driveways, based on the average vehicle speeds on the roadway, is 150 feet. The recommended desirable driveway spacing standard is 250 feet. The arterial streets within the arterial corridor study area are intersected by 199 driveways. The distance between 123 adjacent driveways, or 66 percent of the total driveways, is less than the recommended minimum separation of 150 feet. The distance between 167 adjacent driveways, or 84 percent, is less than the desirable separation of 250 feet.

To minimize conflict between driveway and intersection traffic, driveways and public streets should be separated from signalized intersections by a distance which is a function of average speed and the presence of a median. The recommended minimum distance, or corner clearance, is shown in Figure 48. 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. Proper corner clearance minimizes the potential for the through traffic stream queued at the intersection to block driveway ingress and egress, as well as the potential for a vehicle entering or exiting from a driveway to interfere with the through traffic stream. The minimum corner clearance, based on an average travel speed of 35 mph for traffic on the arterial facilities, ranges between 115 to 230 feet for

Figure 48

# MINIMUM DESIRABLE CORNER CLEARANCES AT SIGNALIZED AND UNSIGNALIZED INTERSECTIONS



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

Item	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

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

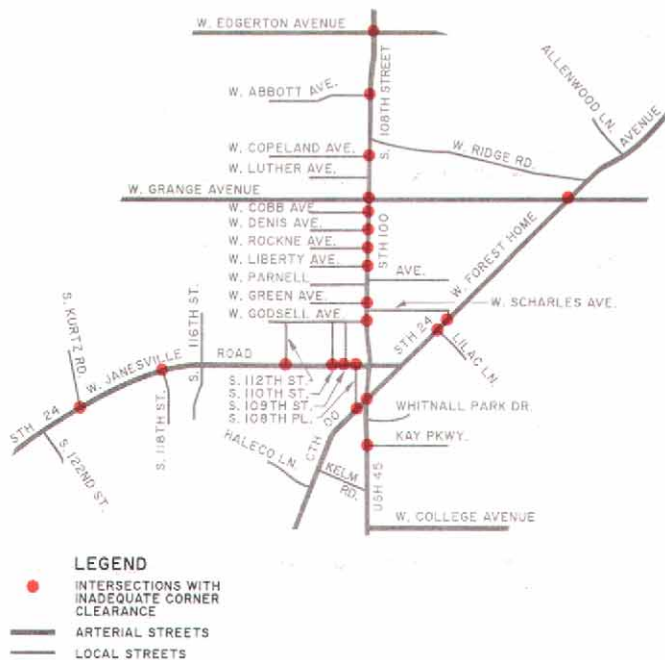
Source: Institute of Transportation Engineers.

signalized intersections, and between 85 feet to 150 feet for stop sign-controlled intersections. The desirable corner clearance for both types of intersections is 250 feet. At the 23 signalized and stop sign-controlled intersections shown on Figure 49, which represent 66 percent of the total intersections on the study arterial segments, the corner clearance is less than the minimum desirable corner clearance. At 32 intersections, or 91 percent of all street intersections with the major arterials, the corner clearance is less than the desirable corner clearance.



Figure 49

**ARTERIAL STUDY CORRIDOR  
INTERSECTIONS WHICH DO NOT MEET  
MINIMUM CORNER CLEARANCE STANDARDS**



Source: SEWRPC.

Inadequate spacing of median openings can also have detrimental effects on arterial facility operation, including increased traffic accidents and traffic delays. Along the major arterials within the Village, the desirable spacing between median openings which should be provided is 460 feet plus additional spacing required to accommodate left-turning vehicles. Of the 24,110 lineal feet of arterial facilities with medians within the Village, 10,800 feet, or about 45 percent, may be considered to meet desirable spacing standards for median openings. The minimum spacing between median openings which should be provided is 275 feet plus additional spacing for left-turning vehicles. Of the 24,110 lineal feet of arterial facilities with medians within the Village, 17,700 feet, or 73 percent, may be considered to meet minimum spacing standards.

## RECOMMENDED PLAN

As noted earlier in this chapter, the existing 1990 and forecast year 2010 average weekday traffic volumes exceed the design capacity of the

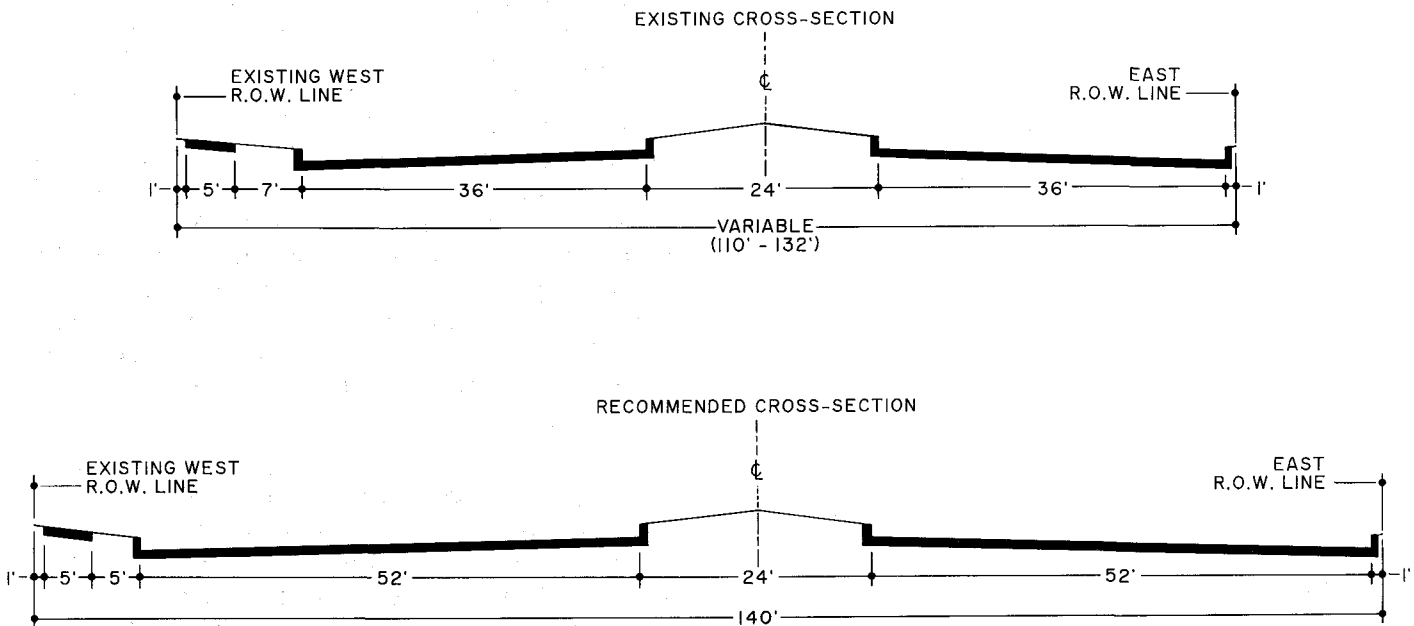
segment of S. 108th Street between the north corporate limits of the Village and Janesville Road. Traffic congestion on this facility, if left in its existing configuration, may be expected even with full implementation of the adopted regional transportation plan. A major highway improvement will be required to abate the existing and future traffic congestion and safety problems on the segment of STH 100 and USH 45 between IH 43 and Janesville Road. With respect to the remainder of the identified major arterials within the Village, existing and forecast year 2010 average weekday traffic volumes may be expected to remain within the design capacity of the existing roadways. As a result, no major improvements need to be considered for Janesville Road, Forest Home Avenue, or S. 108th Street south of Janesville Road within the Village.

The improvement of the segment of S. 108th Street between the north corporate limits of the Village and W. Janesville Road should consist of a widening of S. 108th Street (STH 100 and USH 45) to provide eight traffic lanes, with the additional lanes constructed to the east of the existing roadway on the Wisconsin Electric Power Company right-of-way. The cost of this improvement is estimated at \$6 million, assuming the overhead electric power transmission lines are reconstructed on single poles on the eastern edge of the Wisconsin Electric Power Company right-of-way. It is estimated at \$12 million assuming the power transmission lines are placed underground, as would be desirable. The outer, or curb, lanes of the proposed eight-lane roadway section would operate as acceleration and deceleration lanes for right turns to and from intersecting drive-ways and intersecting local streets along S. 108th Street. The existing, and recommended widened, roadway cross-sections are shown on Figure 50. The recommended widened roadway cross-section is similar to the roadway improvement under construction on Blue Mound Road and Moreland Boulevard (USH 18) in Waukesha County. Current and forecast year 2010 traffic volumes are similar on the segment of the widened Blue Mound Road and the segment of STH 100 and USH 45 between IH 43 and W. Janesville Road.

Other alternatives to the widening of this stretch of STH 100 and USH 45 were considered, but were dismissed as infeasible. These alternatives

Figure 50

**EXISTING AND RECOMMENDED ROADWAY CROSS-SECTIONS ON S. 108TH STREET (STH 100 AND USH 45) BETWEEN W. JANESVILLE ROAD (STH 24) AND THE NORTH CORPORATE LIMITS OF THE VILLAGE OF HALES CORNERS**



Source: SEWRPC.

included a bypass for STH 100 and USH 45. The original regional transportation system plan, completed in 1966, included a Metropolitan Belt Freeway which would have provided an alternative bypass route for this through traffic. This facility was eliminated from the adopted regional transportation system plan in the 1970s, as well as from state and local plans, because of intense public opposition to any further freeway construction. The necessary right-of-way for this facility, which was largely undeveloped and partially in public ownership in the 1970s, has now largely been developed and is no longer in public ownership.

To implement the recommended improvement of S. 108th Street (STH 100 and USH 45) between the north corporate limits of the Village of Hales Corners and W. Janesville Road, the Village of Hales Corners must officially request the Wisconsin Department of Transportation to consider this improvement. South 108th Street is a state

trunk highway and the improvement of S. 108th Street, therefore, is the responsibility of the Wisconsin Department of Transportation. The Wisconsin Department of Transportation, however, may not be expected to pursue such improvement without the strong support for, and the specific request of, the Village of Hales Corners.

It is further recommended that the Village attempt to achieve over time a more desirable spacing of driveways and median openings along the major arterials, as land along the major arterials, particularly STH 100 and USH 45, is developed and redeveloped. That is, modification of the number of driveways and driveway locations should be achieved as land development and redevelopment proposals are reviewed and approved by the Village. The standards, as presented earlier in this chapter, include 150-foot minimum and 250-foot desirable spacing between adjacent driveways; 275-foot

minimum and 460-foot desirable spacing between median openings, plus adequate storage for left-turning vehicles; and corner clearance of driveways to crossing streets of a minimum 115 to 230 feet and a desirable 250 feet. Appendix B provides a memorandum report titled, A Recommended Access Management Plan for a Portion of S. 108th Street (STH 100 and USH 45) Corridor between W. Janesville Road (STH 24) and W. Edgerton Avenue in the Village of Hales Corners, May 1992. This report provides a recommended detailed access management plan for a portion of S. 108th Street which would be compatible with the land uses recommended in the locally preferred land use plan for the aforementioned segment of S. 108th Street.

A number of actions to improve traffic conditions within the Village were also identified by the Village Corridor Plan Advisory Committee

as part of this study. Some of these actions address traffic conditions within the major arterial street corridors, and others address traffic conditions outside the major arterial street corridors. A Southeastern Wisconsin Regional Planning Commission Staff Memorandum entitled, "Evaluation of Transportation Actions Proposed by the Village of Hales Corners Corridor Plan Advisory Committee," March 1991, provides an evaluation of each of these actions and is available from the Village Director of Public Works. It should be noted that, while some of the actions identified by the Village Corridor Plan Advisory Committee may be expected to provide some improvement in traffic conditions on STH 100 and USH 45 within the Village, they would not eliminate the need to provide additional traffic lanes on STH 100 and USH 45 to abate existing and anticipated future traffic congestion.

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## Chapter VI

### PLAN IMPLEMENTATION

#### INTRODUCTION

The land use, urban design, and transportation plans described in Chapters IV and V of this report provide a design for the attainment of the community development objectives set forth in Chapter III. In a practical sense, however, these plans are not complete until the steps necessary to implement them have been specified. After formal adoption of these plans, realization of them will require faithful, long-term dedication to the underlying objectives by the Hales Corners 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 and redevelopment in the Hales Corners corridor study area. Adjustments to the plans should be made as required by changing conditions. Consequently, one of the important tasks of plan implementation is a periodic reevaluation and reexamination of the plans to ensure that they properly reflect current conditions. It is recommended that this reevaluation and reexamination take place about every 10 years, or more frequently if warranted by changing conditions.

Attainment of the locally preferred land use plan for the arterial corridor study area will require not only changes in certain development policies of the Village, but also the introduction of some, and modification of other, plan implementing instruments. The zoning ordinance of the Village should be revised to reflect more accurately current land uses and to make zoning a more effective tool for implementing the plan. Also, several new zoning districts will have to be added to the zoning ordinance in order to implement certain land use elements of the adopted land use plan. All rezoning applications should be carefully reviewed for their relationship to the adopted land use plan. Certain modifications should be made to the Village's land subdivision control ordinance to bring that ordinance into conformance with both the urban design standards set forth in Chapter III of this report and also with a recent revision to Chapter 236 of the Wisconsin Statutes. The official map should be amended as necessary to reflect

existing and proposed property lines, streets, highways, waterways, parkways, parks, and playgrounds.

#### PUBLIC INFORMATIONAL MEETINGS AND HEARINGS

The State of Wisconsin enabling legislation regarding community planning does not require local plan commissions to hold public hearings on proposed master plans prior to adoption. It is nevertheless good planning practice to do so, in order to provide for, and promote, active citizen participation in the planning process. Such public hearings and related public informational meetings are desirable to acquaint residents and landowners with the details of proposed plans and to solicit public reaction to plan proposals. These plans should then be modified to reflect any pertinent new information and to incorporate any sound and desirable new ideas which may be advanced at the informational meetings and hearings. Accordingly, two public informational meetings were conducted on the proposed plans on February 13 and 18, 1993; a formal public hearing was conducted on these plans on March 3, 1993, at the Village Hall before the Village Plan Commission. Detailed minutes of the hearing were recorded by the Village and are on file in the office of the Village Administrator.

#### PLAN ADOPTION

An important step in plan implementation is the formal adoption of the locally preferred land use plan and attendant urban design and transportation plans by the Village Plan Commission and certification of the adopted plans to the Village Board pursuant to the State's enabling legislation. Upon such adoption, these plans become the official guide to decision making by Hales Corners officials concerning the development and redevelopment of the corridor study area. The locally preferred land use plan, urban design plan, and transportation plan were adopted by the Village Plan Commission on March 3, 1993, and subsequently adopted by the Village Board on April 12, 1993, as indicated in the resolutions in Appendices C and D, respectively.

## ZONING

Of all the land use implementation devices presently available, perhaps the most important and most versatile is the zoning ordinance. Following the adoption of the locally preferred land use plan by the Village Plan Commission and certification of the adopted plan to the Village Board, as provided by Section 62.23 of the Wisconsin Statutes, the Village Plan Commission should initiate appropriate amendments to the Village's zoning ordinance and zoning district map to bring the ordinance and map into conformance with the concepts and proposals advanced in the adopted land use plan. Pursuant to the enabling legislation, the zoning changes recommended by the Village Plan Commission can be enacted by the Village Board only after a formal public hearing.

Based upon the findings of an analysis of the current zoning ordinance as reported in Chapter II, the plan policies set forth in Chapter III, and the recommended land use, urban design, and transportation plans set forth in Chapters IV and V, Map 21 and Table 28 indicate, respectively, the zoning district boundaries and attendant regulations recommended to implement the locally preferred land use plan as it pertains to the corridor study area. Site and building development in the proposed zoning districts are also recommended to follow the urban design criteria set forth in Chapter III of this report. The proposed zoning districts and related regulations are discussed below.

### Residential Districts

While the recommended zoning map identifies the continued use of the R-1, R-2, R-3, and R-4 Residence Districts, it is recommended that the zoning regulations for these districts be amended to exclude park and institutional uses from the list of permitted uses in such districts. It is suggested that churches be included as conditional uses. It is further suggested that an exclusive I-1 Institutional District and an exclusive P-1 Park and Recreation District be created and included in the Village's zoning ordinance. As indicated in Table 28, it is suggested that foster and adult homes, family day care homes, and community living arrangements be permitted partial zoning preemptions as set forth in the Wisconsin Statutes. The minimum lot sizes, minimum yard requirements, and maximum building heights for these residential zoning districts would remain the same as would the

mixed use of single- and two-family residential uses in the R-1 and R-2 Districts. The R-3 District would continue to be the only exclusive single-family residential zoning district.

It is also recommended that the zoning ordinance exclude the permitted use of single- and two-family residences in the R-4 District. The less intensive single- and two-family residential uses currently permitted in the R-4 Residence District should not be mixed with the more intensive multi-family residential uses allowed in this district, even on a conditional use basis, owing to the adverse impact a substantially more intensive land use may have upon a lesser intensive use.

### Shopping Center District

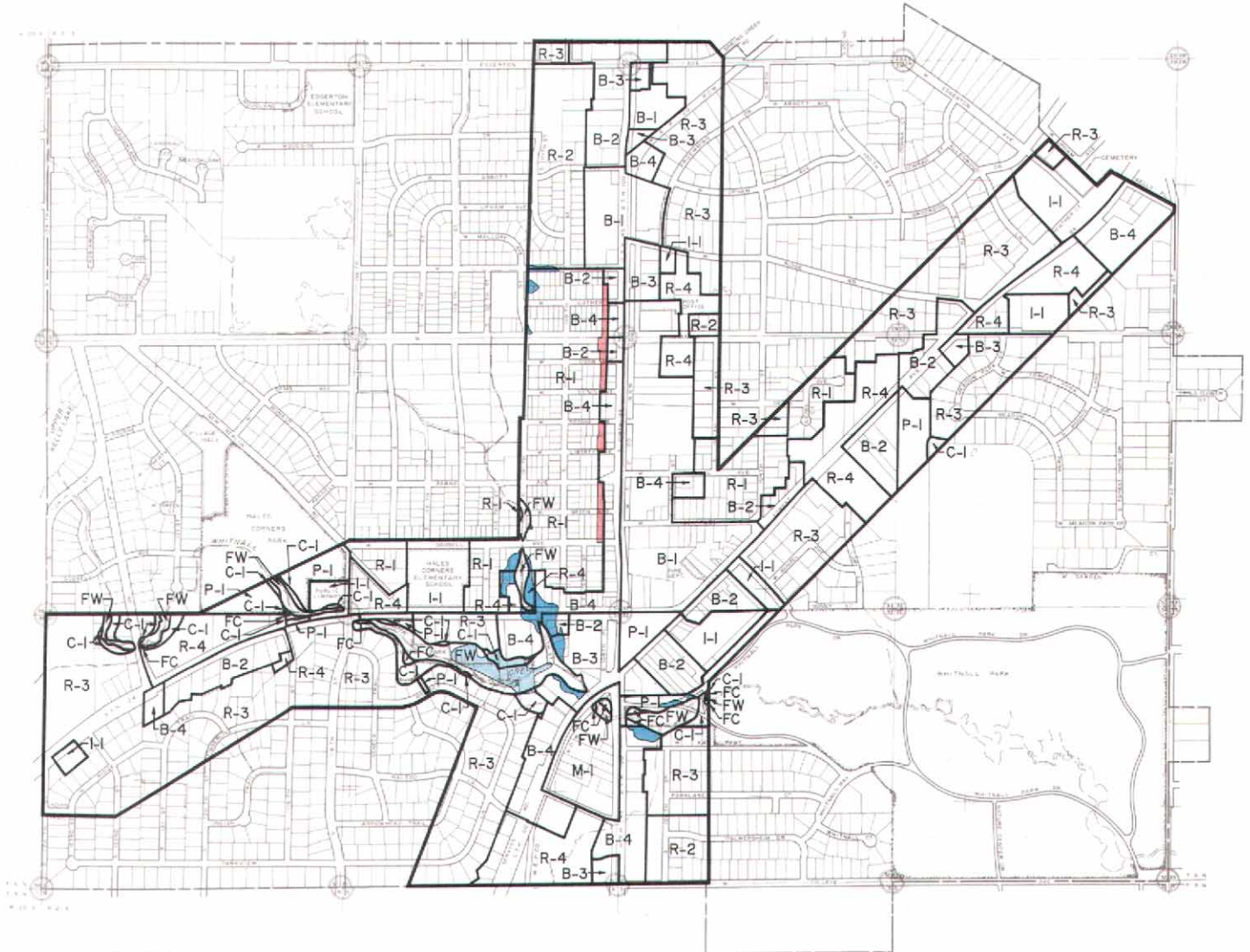
The existing B-1 Business District in the Village zoning ordinance should be changed to a B-1 Shopping Center District. The existing zoning ordinance does not have a shopping center zoning district. This district is intended to provide for groupings of retail and customer service establishments in a shopping center setting. The district would promote onsite parking for customer automobiles combined with a pedestrian-oriented shopping environment. Permitted uses in this district should include large general merchandise stores, food stores, apparel and accessory stores, drug stores, department stores, gift shops, personal services, banks/savings and loan institutions, and restaurants, except drive-in or drive-through types. This district is intended to occupy a minimum district area of two acres. Buildings constructed in the B-1 Shopping Center District could be clustered on parcels of land and under individual or multiple ownership. The B-1 Shopping Center District should be used where shopping centers are proposed on the adopted land use plan for the corridor study area.

### General Business District

The existing B-2 Business District in the Hales Corners zoning ordinance should be changed to a B-2 General Business District. This district would contain many commercial uses permitted in the current B-1 Business District and can be viewed as a modification of that district. The modified district would exclude drive-in and drive-through business uses. Whereas the existing B-1 Business District has no minimum lot size, the proposed B-2 General Business District should have a minimum lot area of 7,200 square feet. The district is intended to provide for the

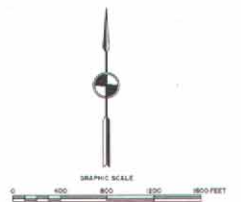
Map 21

RECOMMENDED ZONING MAP FOR THE VILLAGE OF  
HALES CORNERS ARTERIAL STREET CORRIDOR STUDY AREA



LEGEND

—	ZONING DISTRICT BOUNDARY	C-I	CONSERVANCY DISTRICT
R-1	RESIDENCE DISTRICT	FW	FLOODWAY DISTRICT
R-2	RESIDENCE DISTRICT	FC	FLOODPLAIN CONSERVANCY DISTRICT
R-3	RESIDENCE DISTRICT		FLOODPLAIN FRINGE OVERLAY DISTRICT
R-4	RESIDENCE DISTRICT		SHORELAND WETLAND OVERLAY DISTRICT
B-1	SHOPPING CENTER DISTRICT		RESIDENTIAL/BUSINESS TRANSITION OVERLAY DISTRICT
B-2	GENERAL BUSINESS DISTRICT	NONE	PLANNED DEVELOPMENT OVERLAY DISTRICT
B-3	AUTOMOBILE-ORIENTED BUSINESS DISTRICT		
B-4	OFFICE AND PROFESSIONAL SERVICES DISTRICT		
M-1	LIGHT MANUFACTURING DISTRICT		
I-1	INSTITUTIONAL DISTRICT		
P-1	PARK AND RECREATION DISTRICT		



Source: SEWRPC.

Table 28

**SUMMARY OF RECOMMENDED ZONING DISTRICTS IN  
THE VILLAGE OF HALES CORNERS CORRIDOR STUDY AREA**

Type of Zoning District	Principal Permitted Uses	Conditional Uses	Minimum Lot Size		Minimum Yard Requirement			Maximum Building Height (feet)	Proposed Zoning	
			Total Area (square feet)	Width at Frontage (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)		Acres	Percent of Total
R-1 Residence	Single-family dwellings, two-family dwellings, foster and adult family homes, family day care homes, community living arrangements for eight or fewer persons	Community living arrangements for nine to 15 persons and churches	10,000 <sup>a</sup>	75 <sup>a</sup>	35	10	40	30	63.3	8.8
R-2 Residence	Single-family dwellings, foster and adult family homes, family day care homes, community living arrangements for eight or fewer persons	Two-family dwellings on certain streets, community living arrangements for nine to 15 persons, churches	15,000	90	45	10	40	30	37.2	5.1
R-3 Residence	Single-family dwellings, foster and adult family homes, family day care homes, community living arrangements for eight or fewer persons	Community living arrangements for nine to 15 persons and churches	20,000	100	60	15	40	30	229.9	31.9
R-4 Residence	Foster and adult family homes, community living arrangements for nine to 15 persons	Multi-family dwellings, community living arrangements for 16 or more persons, churches	10,000 <sup>b</sup>	80	35	20 <sup>c</sup>	40	35	69.0	9.6
B-1 Shopping Center	Groups of retail stores and shops, services, offices, and restaurants (not drive-in or drive-through types)	Veterinary services, financial institutions with drive-in and drive-through facilities, building supply stores, recycling drop-off centers	Two acres for the development <sup>d</sup>	200	50	10	25	50	67.9	9.4
B-2 General Business	Small customer service establishments such as of retail stores and shops, offices, services, and restaurants (not drive-in or drive-through types)	Veterinary services, financial institutions with drive-in and drive-through facilities, child day care centers, building supply stores, boat sales, recycling drop-off centers	7,200	60	20	10	25	35	52.4	7.3
B-3 Automobile-Oriented Business	None	Automobile-oriented retail sales and service establishments, including automobile sales and service, car washes, gasoline stations, drive-in banking, restaurants (including drive-in and drive-through types)	15,000	100	40	10	25	35	21.8	3.0
B-4 Office and Professional Services	Offices and professional services, including clinical services, financial services, travel agencies, consulting services, and funeral homes	Veterinary services, contractors offices, laboratories, child day care centers	7,200	60	20	10	25	50	42.1	5.8
M-1 Light Manufacturing	Light manufacturing, processing, and/or storage	Outside storage and laboratories	10,000	75	50	10	25	35	40.6	5.6
I-1 Institutional	Schools, child day care centers, churches, hospitals, nursing homes, clinics, museums, art galleries, cemeteries, lodges, public buildings	Gift stores, florists, utilities, funeral homes, communication towers, solid waste management and recycling facilities	10,000	75	35	10	40	60	41.4	5.7
P-1 Park and Recreation	Private and public recreation, art galleries, forest preserves	Amphitheaters, amusement parks, aquariums, certain other recreational uses	.. <sup>d</sup>	.. <sup>d</sup>	50	50	50	35	25.8	3.6
C-1 Conservancy	Existing agricultural uses and forest preserves	Essential services	..	..	..	..	..	..	8.5	1.2



Table 28 (continued)

Type of Zoning District	Principal Permitted Uses	Conditional Uses	Minimum Lot Size		Minimum Yard Requirement			Maximum Building Height (feet)	Proposed Zoning	
			Total Area (square feet)	Width at Frontage (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)		Acres	Percent of Total
FW Floodway	Agricultural uses, excluding structures, fish hatcheries, forest preserves, utilities	Navigational structures, bridges, utilities, park and recreational areas, excluding structures, other open space uses	--	--	--	--	--	--	19.8	2.7
FC Floodplain Conservancy	Agricultural uses, excluding structures and certain recreational uses	Flood-proofed roads, nonhabitable structures, and utilities	--	--	--	--	--	--	1.9	0.3
FFO Floodplain Fringe Overlay	Any use of land, except structure, permitted in the underlying zoning district	Filling and floodproofed structures and utilities permitted in the underlying zoning district	-- <sup>e</sup>	-- <sup>e</sup>	-- <sup>e</sup>	-- <sup>e</sup>	-- <sup>e</sup>	-- <sup>e</sup>	-- <sup>f</sup>	-- <sup>f</sup>
SWO Shoreland Wetland Overlay	Recreational uses, existing agricultural uses, utilities	None	--	--	--	--	--	--	-- <sup>f</sup>	-- <sup>f</sup>
RBTO Residential/Business Transition Overlay	-- <sup>e</sup>	-- <sup>e</sup>	-- <sup>e</sup>	-- <sup>e</sup>	-- <sup>e</sup>	-- <sup>e</sup>	-- <sup>e</sup>	-- <sup>e</sup>	-- <sup>f</sup>	-- <sup>f</sup>
PDO Planned Development Overlay	-- <sup>e</sup>	-- <sup>e</sup>	--	--	--	--	--	-- <sup>e</sup>	-- <sup>f</sup>	-- <sup>f</sup>
Total	--	--	--	--	--	--	--	--	721.6 <sup>f</sup>	100.0 <sup>f</sup>

<sup>a</sup>No building shall be erected or structurally altered on a lot which provides less than 5,000 square feet of land per family or housekeeping unit and less than 40 feet of lot width per building for each family or housekeeping unit.

<sup>b</sup>Lots shall provide at least 2,500 square feet of area for each efficiency or one-bedroom dwelling unit and at least 5,000 square feet of area for each two-bedroom or larger dwelling unit.

<sup>c</sup>For buildings where there is a detached garage on the north or west side, a side yard of not less than 10 feet shall be provided.

<sup>d</sup>Lots shall provide sufficient area for the principal structure and its accessory structures, off-street parking, and loading areas, and all required yards.

<sup>e</sup>As per underlying basic zoning district requirements.

<sup>f</sup>Overlay zoning districts are excluded from the total.

Source: SEWRPC.

orderly and attractive development of individual general retail establishments in appropriate and convenient locations. The district should require adequate off-street parking and loading areas, landscape planting screens in areas adjacent to nonbusiness development or other incompatible uses and development in character with the adjacent land uses. The district would also encourage the use of shared entrances and parking lots. The B-2 General Business District is intended to be used where general retail sales and service areas are recommended on the adopted land use plan for the corridor study area.

#### Automobile-Oriented Business District

A B-3 Automobile-Oriented Business District should be provided in the Hales Corners zoning

ordinance. The existing zoning ordinance does not contain such a district. The B-3 District is intended to provide for such automobile-oriented uses as gasoline stations, automobile sales/service establishments, car washes, and drive-in or drive-through banking and restaurants. The district should require onsite parking for customer automobiles and customer off-street loading facilities combined with a very limited pedestrian-oriented shopping environment. The proposed B-3 District should require a minimum lot area of 15,000 square feet. This district is intended to be used along S. 108th Street and W. Forest Home Avenue in areas recommended for automobile-oriented retail sales and services on the adopted land use plan for the corridor study area.

#### Office and Professional Services District

A B-4 Office and Professional Services District should be provided in the Hales Corners zoning ordinance. This district would be similar to the existing B-2 Business District and can be viewed as a modification of that district with respect to the type of uses permitted. Whereas the existing B-2 Business District permits residential uses mixed with business uses, the proposed B-4 Office and Professional Services District would not allow residential uses. The B-4 Office and Professional Services District is intended to provide for individual or grouped office and professional business service uses, including professional offices, medical offices, dental offices, clinics, drugs and medical supplies, and funeral homes, in areas where these uses will be compatible with other surrounding uses. This district is intended to occupy a minimum district area of 7,200 square feet. The proposed B-4 District should be used where office and professional service uses are recommended on the adopted land use plan for the corridor study area.

#### Light Manufacturing District

The M-1 Commercial and Light Manufacturing District that currently exists in the current zoning ordinance should be changed to a M-1 Light Manufacturing District. This district would be similar to the existing M-1 Commercial and Light Manufacturing District, except general commercial uses would not be permitted, in order to preserve land and the character of such lands for manufacturing uses. The M-1 Light Manufacturing District is basically intended to provide for warehousing, light manufacturing, and construction-related industry of a more restrictive nature in areas where the relationship to surrounding land uses would create fewer problems of compatibility than heavy manufacturing and industrial uses. The district should provide a minimum lot size of 10,000 square feet. This district should be applied to the area proposed on the adopted land use plan for industrial uses in the corridor study area, generally bounded by W. Forest Home Avenue on the north and west, S. 108th Street on the east, and W. Kelm Road on the south.

#### Institutional District

An I-1 Institutional District should be provided. The existing Hales Corners zoning ordinance does not have such a district. The district is intended to eliminate the ambiguity of maintaining unrelated use districts which are under

public or public-related ownership and whose use for public purpose is anticipated to be permanent. The district should have a minimum lot size of 10,000 square feet. The district should be used in areas identified for institutional development in the adopted land use plan.

#### Park and Recreation District

A P-1 Park and Recreation District should be provided in the Hales Corners zoning ordinance. The existing ordinance does not have such a district. The P-1 Park and Recreation District is intended to provide areas to meet the open space and outdoor recreational needs of citizens without undue disturbance of natural resources and adjacent uses. When applied to privately owned recreational lands, this district is intended to avoid the conversion of such lands to other urban uses without adequate public review and approval. There is no minimum lot size requirement for this district. The district should be used for areas designated as park and recreation in the adopted land use plan.

#### Conservancy District

A C-1 Conservancy District should be provided in the revised zoning ordinance. The existing ordinance does not have such a district. This district is intended to be used to prevent the destruction of valuable natural resources and, in particular, woodlands, wildlife habitat areas, areas of steep topography, and related scenic areas. Regulation of these areas should serve to control erosion and sedimentation and to protect the natural resource base while promoting and maintaining not only the natural beauty of the area but also the public welfare. The district should have no minimum area requirements. The district should be used in those areas of the Village identified in the adopted land use plan as having significant combinations of woodland and wildlife habitat and would generally be applied in the upland portions of areas identified in the land use plan as primary or secondary environmental corridors.

#### Floodplain and Shoreland Wetland Districts

The purpose of the floodplain districts is to provide a uniform basis for the implementation and administration of sound floodplain management regulations for all floodplains within the Village to protect life, health and property; minimize expenditures of public monies for costly flood control projects; minimize rescue and relief efforts, generally undertaken at the expense of the tax paying public; minimize

business interruptions which usually result in the loss of local incomes; minimize damage to public facilities on the floodplains such as water mains, sewer lines, streets and bridges; minimize the occurrence of future flood blight areas on floodplains; and discourage the victimization of unwary land and home buyers. Areas regulated should include all lands within the corporate limits of the Village that would be inundated by a "regional flood" and are divided into three districts: FW Floodway District; FC Floodplain Conservancy District; and FFO Floodplain Fringe Overlay District.

The FW Floodway District is intended to preserve, in essentially open land uses, the floodway of all waters in the Village found necessary to safely carry and discharge the 100-year recurrence interval floodwaters. The FC Floodplain Conservancy District is intended to preserve lands as natural open space in order to provide storage for floodwaters, thus maintaining and improving water quality, reducing downstream flood flows and stages and preventing flood damage, protecting wildlife habitat areas, and prohibiting structures on soils generally not suitable for such use. The FC Floodplain Conservancy District shall apply to the floodplain fringe portion of the Village's streams and floodlands located within lands delineated in the adopted land use plan as primary or secondary environmental corridors. The FFO Floodplain Fringe Overlay District is intended to provide for and encourage the most appropriate use of land and water in areas subject to periodic flooding and to minimize flood damage to people and property. This district includes areas where urban development exists in the flood fringe portion of the floodlands. The FFO Floodplain Fringe Overlay District shall apply to the floodplain fringe portion of the Village's streams and shall be in addition to any regulation imposed by the underlying basic use district. These floodplain districts should have no minimum area requirements.

Where wetland areas occur within delineated floodplain and "shoreland" areas, regulations outlined for the SWO Shoreland Wetland Overlay Zoning District would also apply in the affected areas. In addition, Chapter NR 117 of the Wisconsin Administrative Code sets forth minimum standards for local zoning ordinances in order to protect identified wetland areas.

"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. Lakes, ponds, flowages, rivers, and streams are presumed to be navigable if they are listed in the Wisconsin Department of Natural Resources publication titled Surface Water Resources of Milwaukee County or are shown on the United States Geological Survey quadrangle maps. Wetlands five acres or more in area in the shoreland jurisdiction area are protected by the regulations established for the Shoreland-Wetland Overlay Zoning District. Wetlands not located in the floodplain or the "shoreland" area should be protected by the regulations outlined for the C-1 Conservancy District. These districts are intended to be used to prevent the destruction of valuable natural resources and, in particular, wetland areas, where development would result in hazards to health or safety or would deplete water quality or destroy natural resources or be otherwise incompatible with the public welfare. The overlay zoning district should have no minimum area requirements and should generally be applied in lowland and wetland areas identified in the adopted corridor land use plan as primary or secondary environmental corridors.

#### Residential/Business Transition Overlay District

A RBTO Residential/Business Transition Overlay District should be provided in the Hales Corners zoning ordinance. The existing ordinance does not have such a district. This zoning district is intended to protect existing single-family residential uses in the intermediate term until an orderly transition to a commercial use is approved by the Village Board. For this purpose, use of lands in this overlay district should be reviewed at least once every five years, or more often when adjacent lands develop into commercial uses. Lands included in this district should be located near commercial uses and where conversion to commercial use is expected to occur in the foreseeable future. Uses permitted in the Residential/Business Transition Overlay District should be consistent with uses permitted in the underlying basic use district and the zoning requirements set forth in this underlying district.

### Planned Development Overlay District

A PDO Planned Development Overlay District should be provided in the Hales Corners zoning ordinance. This district is intended to permit development that will be enhanced by coordinated site planning, diversified location of structures, and mixed, but compatible, land uses. Such developments are intended to provide a safe and efficient system for vehicular and pedestrian traffic, to provide attractive recreation and 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. The PDO Planned Development Overlay District would allow for flexibility in site design, with benefits from such flexibility intended to be derived by both the developer and the community. At the same time it would maintain, insofar as possible, the land use intensity and other standards or use requirements set forth in the underlying basic zoning district or overlay. The district may be used in areas designated for residential, commercial, industrial, governmental and institutional, or park and recreational land use in the locally preferred land use plan. Vacant lands should not be rezoned into this district 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 appearance and proper design of urban developments within the corridor study area, as well as the entire Village, consistent with the urban design criteria outlined in Chapter III, will ensure an attractive community and help stabilize or increase property values for the good of both the community and the individual property owner. To achieve this objective, the development plan submittal requirements should include additional requirements and provision of detailed information to be provided pertaining to the site, landscaping, and architectural elements of a development or redevelopment plan. Additional 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 properly development and redevelopment proposals within the corridor study area.

To ensure that the built environment will foster the attractiveness of the community as a place

to live and work, the Hales Corners zoning ordinance should also establish specific minimum landscape requirements and architectural requirements that are at least consistent with the urban design standards set forth in Chapter III. The zoning ordinance should contain specific provisions for landscape plan submittal requirements as well as the minimum amount of landscaping that should be provided on a proposed development or redevelopment project. Minimum landscape requirements should be established for, but not limited to, building foundation planting; advertisement sign landscaping; parking lot screening; screening of solid waste collection and disposal equipment and mechanical equipment; 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. Architectural review guidelines, similar to those in Appendix A, should be provided in the Village zoning ordinance to assure respect for, and reduce incompatible and adverse impacts on, the visual experience in a community, especially along the major arterial corridors, without stifling innovative architecture. Specifically, architectural review guidelines would promote an attractive community atmosphere, compatible development, stability of property values, and prevent impairment or depreciation of property values.

A detailed analysis of the existing zoning ordinance should be conducted to determine its probable deficiencies for systematic implementation of the urban design elements of the land use plan. As noted earlier in Chapter II, the Village is currently in the process of establishing such provisions in the zoning ordinance to guide the Village in the review of proposed building plans as well as related site and landscape plans.

### SUBDIVISION PLAT REVIEW AND REGULATION

The land use plan should serve as a basis for the review by appropriate officials of the Village of land subdivision plats and certified survey maps. Urban subdivisions should not be approved in areas recommended in the plan to remain in nonurban uses unless the developer can justify changing the land use plan. Any such proposed departures from the land use plan



should be carefully considered by the Village Plan Commission and should be made 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 current land division ordinance as set forth in Chapter 9 of the Municipal Code contains few deficiencies. The few deficiencies that do exist can be readily corrected through the amendment of the existing ordinance by revising the street design requirements so that the minimum dimensions are consistent with those established in Chapter III and amending the 20-day preliminary plat review period of an objecting authority to 30 days in order to be consistent with Chapter 236 of the Wisconsin Statutes.

## OFFICIAL MAPPING

Sections 61.35 and 62.23(6) of the Wisconsin Statutes provide 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 and parkways, and the location and extent of railway rights-of-way, public transit facilities, and parks and playgrounds. The official map, which has the force of the 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 buildings or structures and their associated improvements on land that has been designated for future public use. Furthermore, the official map is the only arterial street and highway system plan implementation device that operates on a community-wide basis in advance of land development, and can thereby effectively assure the integrated development of the street and highway system. 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 present official map of the Village shows all existing property and street right-of-way lines, park and school sites, and some proposed street right-of-way lines. Following adoption of the plan, the official map should be amended to

show any new and proposed expansions of planned streets and highways, parks and parkways, and drainage facilities.

## THE CAPITAL IMPROVEMENTS PROGRAM

A capital improvements program consists basically of a prioritized list of fundable major public improvements needed in a community over the next five years, arranged in order of degree of need and adjusted to the community's ability to pay. 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 provided for. Land needed for the projects can be acquired in a timely fashion and staged construction facilitated.

It is recommended that those elements of the plan requiring public expenditures for implementation, including beautification projects, be integrated into the Village's capital improvements program.

## THE NEED FOR REVITALIZATION PLANNING

Detailed revitalization plans should be prepared for the selected arterial street corridors concerned and a potential "village center." The preparation of precise urban development or redevelopment plans for these areas will serve to further refine and detail the aforementioned recommended plans. Such a detailed plan, if properly done and implemented, will greatly enhance the image and character of the Village of Hales Corners.

Specifically, detailed streetscape plans should be prepared for the major arterials concerned which should include, but not be limited to, proposed street tree plantings along the arterials and large landscape beds in medians and around the "Welcome" signs. In addition, a detailed urban

design plan should be prepared for developing a uniquely identifiable "village center" to signify that one is in the Village of Hales Corners. These detailed plans should contain site- and building-specific proposals. As noted earlier, schematic plans were prepared for a proposed "village center" in Chapter IV of this report and in a document prepared by Planning and Design Institute, Inc.<sup>1</sup> Further analyses, especially an in-depth traffic engineering study, should be conducted prior to developing a "village center". The urban design plans would be of a very high

level of specificity, including development or redevelopment proposals, for buildings, signs, on-street and off-street parking areas, sidewalks, landscaping, and necessary off-site traffic improvements, more detailed than a general land use or schematic urban design plan.

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<sup>1</sup>*Planning and Design Institute, Inc., Hales Corners Village Center, 1992.*

## Chapter VII

### SUMMARY

Early in 1988, the Village of Hales Corners requested that the Southeastern Wisconsin Regional Planning Commission assist the Village Plan Commission in the development of a land use, urban design, and transportation plan for certain major arterial street corridors through the Village. This report sets forth the findings and recommendation of the planning effort undertaken in response to that request.

The study area was defined as an approximately one-square-mile area encompassing three major arterial corridors: S. 108th Street (STH 100 and USH 45), W. Janesville Road (STH 24), and W. Forest Home Avenue (STH 24/CTH 00). The planning effort involved extensive inventories and analyses of the factors and conditions affecting development within the study area, including existing and probable future resident population and employment levels, the natural resource base, existing land uses, and existing local plan implementation devices. This effort also involved the formulation of a set of development objectives and supporting standards for the study area, the preparation of alternative land use plans and a single urban design plan and transportation plan for the corridors, and the selection of recommended land use plans which best meets the agreed upon development objectives. The plans, when adopted by the Village Plan Commission and the Village Board, are intended to serve as a guide for making development and redevelopment decisions within the corridor. The planning effort also included specific urban design recommendations and a recommendation of activities to help carry out the plans over time.

#### CITIZEN INPUT

To consider thoroughly the general concerns and desires of the Village of Hales Corners residents and businesses with respect to development-related issues in the study area, the Village requested the University of Wisconsin-Milwaukee Management Research Center to conduct a survey of public attitudes. The findings of this study are documented in a report entitled Results of Preliminary Research on

Attitudes of Citizens of Hales Corners Pertaining to the Commercial Corridor, University of Wisconsin-Milwaukee Management Research Center, circa 1989. The findings of three surveys, a benchmark opinion survey, a business owner survey, and a focus group survey, found traffic, especially traffic on S. 108th Street (STH 100 and USH 45), the most common concern and the lack of aesthetic appeal and a unique Village identity the second most common concern.

The Village Plan Commission created a Corridor Plan Advisory Committee consisting of residents and business representatives to guide the planning effort. The Committee identified perceived problems and positive characteristics of the corridors, established desired goals and objectives for the corridors, and suggested measures to be considered in addressing the problems and in enhancing the positive attributes of the study area. The Village compiled this information into a report entitled Land Use, Aesthetic, and Transportation Recommendations by the Corridor Plan Advisory Committee for Selected Arterial Street Corridors in the Village of Hales Corners, 1991. The information in this report was carefully considered in the process of creating and evaluating the land use, urban design, and transportation plans for the study area.

#### DEVELOPMENT OBJECTIVES, PRINCIPLES, STANDARDS, AND RELATED URBAN DESIGN CRITERIA

Early in the planning process, development objectives, principles, standards, and related urban design criteria were formulated. The objectives are intended to express the long-term physical development goals of the Village of Hales Corners. 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. Urban design criteria have been developed for the study area with respect to urban and site planning design, architectural design, and sign design. These criteria are intended to be used by 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.

## RECOMMENDED LAND USE AND URBAN DESIGN PLANS

The land use and urban design plans and the transportation plan should be considered as a flexible guide to help the officials of the Village and concerned citizens in the review of development and redevelopment 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 revised as necessary.

### Recommended Land Use Plan

The locally preferred land use plan sets forth recommendations concerning the type, amount, and location of various lands uses for the study area. Specific as well as general land use development recommendations are contained in this plan, thereby providing Hales Corners officials with substantial flexibility in guiding land use development and redevelopment.

Residential Land Uses: Under the locally preferred land use plan, new residential development is proposed to occur through the creation of new residential areas contiguous to, and extending outward from, existing residential developments. This plan identifies three general categories of residential land use based upon the Village's current residential zoning districts. Low-density, single-family residential development would consist primarily of existing residential lots located throughout the corridor study area with two new residential developments proposed in the southwestern and north-central parts of the study area. Areas proposed for medium-density, two-family residential development are to be generally located in the central part of the corridor study area. Areas proposed for high-density, multi-family residential development are to be typically located near and along arterial streets and highways or collector streets in order to provide ease of vehicular access to these facilities and to commercial retail and service centers.

Commercial and Industrial Land Uses: The locally preferred land use plan depicts a variety of areas devoted to commercial land uses. Most

of the commercial areas shown on the locally preferred land use plan represent expansions of already existing commercial retail sales and service land uses along the major arterial streets. The plan further identifies lands for four basic types of commercial uses: shopping center retail sales and service, general retail sales and service, automobile-oriented retail sales and services, and office and professional business services. The plan also recommends the designation of approximately 10 acres of land for industrial uses in the south central part of the corridor study area.

Communication, Utility, Governmental, and Institutional Land Uses: The locally preferred land use plan identifies land for communication and utility land uses. This includes the continued use of the existing Wisconsin Electric Power Company's right-of-way, with a decrease in its width in certain areas to allow for the future widening of the north segment of S. 108th Street between the north corporate limits of the Village and W. Janesville Road (STH 24). Ideally, it is recommended that the overhead utility lines be placed underground, thus requiring less utility right-of-way width and enhancing the aesthetic appearance of the corridor. If this recommendation is too costly, another alternative is to bury the distribution lines located on wooden poles while replacing the pylon towers with single poles. Governmental and institutional land uses include the continuation of such uses as already exist.

Park, Recreational, and Open Space Land Uses: The locally preferred land use plan calls for the expansion of existing parks in the study area. In 1989, there were three parks in the Village of Hales Corners corridor study area: Hales Corners Park and Cobb Park, both community park sites owned by Milwaukee County and the Village, respectively, and Whitnall Park, a county-owned regional park site. This plan proposes that additional land be purchased to expand the southern part of Hales Corners Park to include approximately 13,000 square feet of secondary environmental corridor areas and to expand Cobb Park to the east to include approximately one acre of secondary environmental corridor along Whitnall Park Creek. Approximately five miles of recreational trails consisting of combination pedestrian-bicycle paths are proposed for the Village. These paths would serve dual purposes by providing for recreational



trail activities through environmental corridors and for safe pedestrian and bicycle access to important public facilities such as parks, schools, and the library. These trails would assist in linking both significant man-made and natural features of the Village and environs.

Environmental Corridors: Other open space uses indicated on the plan, in addition to park and recreational uses, include the primary and secondary environmental corridors, to be preserved in essentially natural, open uses. These corridors are located primarily in Whitnall Park and along Whitnall Park Creek. It is recognized that existing public outdoor recreation and related open space uses that consist of passive recreation activities, such as hiking and picnicking, with minimal disturbance to the natural environment, generally serve to protect such corridors. Therefore, the locally preferred land use plan recommends that such corridors be maintained for resource preservation and limited recreation purposes and that such maintenance be promoted through proper zoning.

#### Suggested Urban Design Plan

The land use plan recommends that the Village continue its efforts to maintain and improve the visual experience along the selected arterial corridors and the vitality of its business climate through development and redevelopment. The appearance and proper design of sites within the study area as well as the entire Village will ensure an attractive community and help stabilize or increase property values to the advantage of both the community and the individual property owners concerned.

Suggested urban design solutions include:

1. Creating a distinctly identifiable "village center" where the three major arterials traversing the Village intersect;
2. Providing cohesive urban massing along the north segment of S. 108th Street;
3. Reducing or eliminating the negative visual clutter of overhead utility lines and supporting structures;
4. Replacing the visual clutter of two rows of street lights in the medians in the W. Janesville Road and W. Forest Home Avenue right-of-way with single-pole street lights;

5. Streetscaping along the major arterials, concerned including planting of street trees, provision of raised median landscape beds, and provision of decorative banners on street lights;
6. Encouraging landscaping to be provided by private property owners, including building foundation landscaping, parking screening, buffer yard or perimeter landscaping, advertisement sign landscaping, and interior parking lot landscaping;
7. Providing architectural guidelines; and
8. Improving vehicular, bicycle, and pedestrian circulation.

Although the Village has a number of physical problems, it also has certain assets which can be enhanced to the benefit of the community. The heavy traffic along the three major arterials provides the Village an opportunity to present a positive image to users of those facilities. Since the arterials, especially S. 108th Street, serve as the "main streets" of the Village, an effort should be made to change the current highway strip commercial image to one which conveys a more positive image of the Village of Hales Corners. Furthermore, a unique opportunity exists to link the potential village center with Whitnall Park, a major regional attraction.

#### TRANSPORTATION PLAN

A transportation plan was developed for the three major arterial street corridors in the Village: S. 108th Street (STH 100 and USH 45), W. Janesville Road (STH 24), and W. Forest Home Avenue (CTH 00/STH 24). The existing 1990 and forecast year 2010 average weekday traffic volumes exceed the design capacity of the segment of S. 108th Street between the north corporate limits of the Village and W. Janesville Road. This segment of S. 108th Street should be widened to provide eight traffic lanes, with the additional lanes constructed east of the existing roadway within the Wisconsin Electric Power Company right-of-way. The outer, or curb, lanes of the proposed eight-lane roadway would operate as acceleration and deceleration lanes for right turns to and from intersecting driveways and intersecting local streets. With respect to the remainder of the identified major arterials within the Village, existing and forecast year

2010 average weekday traffic volumes may be expected to remain within the design capacity of the existing roadways. Therefore, no major improvements need to be considered for W. Janesville Road, W. Forest Home Avenue, or S. 108th Street south of W. Janesville Road.

Access to the land along the study arterials is provided both through intersections with local streets and through intersecting driveways. Inadequate driveway spacing can severely limit the functioning and safety of a roadway. Sixty two percent of the 199 driveways intersecting the three major arterials have less than the recommended minimum separation of 150 feet between them. Inadequate spacing of median openings can also have detrimental impacts. Some 2.5 miles of the total 4.6 miles of major arterials within the Village do not meet the desirable spacing between median openings, which is 460 feet plus the additional distance necessary to accommodate left-turning vehicles. It is recommended that the Village work with the Wisconsin Department of Transportation and affected property owners to achieve the recommended access standards.

## PLAN IMPLEMENTATION

After holding public informational meetings and hearings on the land use, urban design, and transportation plans, an important step toward plan implementation is the adoption of the plans by the Village Plan Commission and certification of the adopted plans to the Village Board. Upon such adoption, the plans become the official guide to the making of decisions by Hales Corners officials concerning the development and redevelopment of the study area. The locally preferred land use plan, urban design plan, and transportation plan were adopted by the Village Plan Commission on March 3, 1993, and subsequently adopted by the Village Board on April 12, 1993.

Following plan adoption, the Village Plan Commission should initiate appropriate amendments to the Hales Corners land subdivision and zoning ordinances and its zoning district map as necessary to help implement the adopted land use plan and related urban design standards. In addition, existing and proposed streets, highways, and parks shown on the plan should be incorporated into the official map for the Village. Village officials should work with the Wisconsin Department of Transportation toward the widening of S. 108th Street and the attainment of the access standards recommended in the transportation plan. The adopted land use plan should serve as a basis for the review of land subdivision plats and certified survey maps by local officials. All urban subdivision should be required to provide for a full complement of urban services. Likewise, those elements of the plan requiring public expenditures for implementation, including beautification projects, should be integrated into the capital improvements program of the Village.

Within the framework of the land use plan for the study area, detailed revitalization plans should be prepared for the arterial corridors concerned and for the potential "village center." The preparation of such site-specific improvement plans will serve to further refine and detail the adopted land use plan.

## CONCLUDING REMARKS

The locally preferred land use plan, the urban design plan, and the transportation plan herein presented, with supporting implementation devices, provide a means for promoting orderly growth and development of the Village corridor study area. Consistent application of these plans will assure that individual physical development and redevelopment proposals will be channeled toward the sound development of the study area.

## **APPENDICES**

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## **Appendix A**

### **SUGGESTED ARCHITECTURAL REVIEW GUIDELINES**

#### **PURPOSE AND INTENT**

The architectural compatibility of buildings located along arterial streets is of critical public concern. The intention of public review of proposed building designs by a review committee is to avoid incompatible building designs and adverse impacts on the visual experience from the arterial streets. The development or redevelopment of buildings should be consistent with the general intent and purposes of promoting the public health, safety, and general welfare; maintaining the good appearance of the Village; and promoting development and redevelopment of buildings in harmony with the adopted comprehensive plan for the development of the Village. Architectural review guidelines for buildings are set forth herein for the specific purpose of promoting an attractive community, compatible development, stability of property values, and to prevent impairment or depreciation of property values.

#### **ARCHITECTURAL REVIEW GUIDELINES**

The following guidelines are established for the aforementioned purposes and are intended to apply to all new buildings and to changes or additions to existing buildings in the Village.

1. The proportions, the 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 otherwise altered.
2. The visual continuity of roofs and their contributing elements (parapet walls, copings, cornices, etc.) 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 that it is unsightly or offensive to generally accepted taste and community standards.
4. No building shall be permitted whose design or exterior appearance is so nearly identical to those adjoining as to create excessive monotony or drabness.
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. A minimum of 30 percent of the front of all buildings, that is, the side facing streets on which the building is deemed to front, shall be finished with brick, fieldstone, or decorative masonry material, except where the building style requires a different material. Aluminum or vinyl siding which has the appearance of wood siding or other compatible material may, however, be permitted. Commercial, manufacturing, and institutional buildings on corner lots shall have the required masonry siding on the facade facing each street. No metal-faced building shall be constructed in a residential or business district. All faces of buildings shall be kept in good repair and present a good appearance at all times. All buildings shall be of approved construction, in conformance with all applicable building codes.
6. Since the selection of building colors has a significant aesthetic and visual impact upon the public and neighboring properties, color shall be selected in general harmony with the existing neighborhood buildings.
7. Accessory buildings shall be built with materials compatible with those of the principal building on the same site.

8. No overhead doors on commercial, manufacturing, or institutional buildings shall face upon a street right-of-way.
9. 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 incident 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.
10. No building shall be permitted that would have a negative impact on the maintenance of safe and healthful condition in the Village.
11. Buildings shall maintain existing topography, drainage patterns, and vegetative cover insofar as is practical to prevent indiscriminate earth moving or clearing of property, disfiguration of natural land forms, and disruption of natural drainage patterns.
12. Buildings shall be provided with adequate public services, as approved by the appropriate utility.
13. No buildings shall obstruct the passage of natural light to an adjacent property.
14. No buildings shall impair the enjoyment of historic attractions and areas of significant historic interest.
15. Buildings on premises which have historical significance as certified by the Hales Corners Historical Society shall be maintained or restored insofar as is practicable in a manner which will protect their historical significance, in accordance with the standards promulgated by the U. S. Secretary of Interior for historic preservation projects.
16. Buildings shall be consistent with the public goals, objectives, principles, standards, policies, and urban design criteria set forth in the adopted community master plan of the Village or any component thereof.

**Appendix B**

**COMMUNITY ASSISTANCE STAFF MEMORANDUM**

**Community Assistance Division  
Southeastern Wisconsin Regional  
Planning Commission  
Village of Hales Corners Planning  
Staff Memorandum No. 92-2  
May 1992**

**BY: The Staff of the Southeastern Wisconsin Regional Planning Commission**

**FOR: The Village of Hales Corners Plan Commission, Milwaukee County, Wisconsin**

**SUBJECT: A RECOMMENDED ACCESS MANAGEMENT PLAN FOR A PORTION  
OF THE S. 108TH STREET (STH 100 AND USH 45) CORRIDOR BETWEEN  
W. JANESVILLE ROAD (STH 24) AND W. EDGERTON AVENUE  
IN THE VILLAGE OF HALES CORNERS**

The staff of the Village of Hales Corners has requested that a memorandum on access management be prepared separate from SEWRPC Community Assistance Planning Report No. 195, A Land Use, Urban Design, and Transportation Plan for Selected Arterial Street Corridors in the Village of Hales Corners. The staff requested that this memorandum set forth a recommended access management plan which would be compatible with the land uses recommended in the locally preferred corridor land use plan documented in the aforereferenced SEWRPC Community Assistance Planning Report No. 195. This memorandum provides such a plan and attendant plan implementation recommendations.

## DRIVEWAY AND MEDIAN SPACING STANDARDS

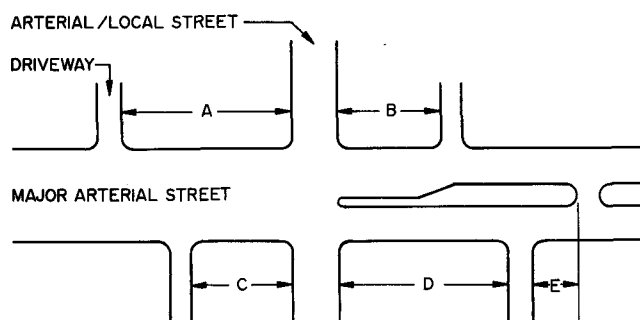
Access to the lands lying along S. 108th Street is provided by both intersecting streets and driveways. Inadequate driveway spacing can have a detrimental effect on the operational characteristics of a roadway, including an increase in traffic accidents and a reduction in roadway capacity. Driveways in effect create additional intersections and increase the complexity of driving. The recommended minimum spacing between driveways, based on an average vehicle speed of 35 miles per hour on S. 108th Street (STH 100 and USH 45), is 150 feet; the recommended desirable driveway spacing is 250 feet. Driveways should be located at median openings, or offset by a minimum of 150 feet from such openings, while continuing to meet minimum spacing requirements.

To minimize conflicts between through and local driveway and intersection traffic, driveways should be separated from adjacent intersections by a distance which is a function of average speed, of the intersection traffic control, and of the presence of a median. The recommended minimum distance, or corner clearance, is shown in Figure B-1. 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 land access driveway upstream or downstream of the intersection. Proper corner clearance minimizes the potential for the through traffic stream queued at the intersection to block driveway ingress and egress, as well as the potential for vehicles entering or exiting from driveway to interfere with the through traffic stream. The minimum corner clearance, based on an average travel speed of 35 miles per hour for traffic on the arterial facility, ranges between 115 to 230 feet for signalized intersections, and between 85 feet to 150 feet for stop sign-controlled intersections. The desirable corner clearance for both types of intersection is 250 feet.

Inadequate spacing of median openings can also have a negative impact on traffic flow including increased traffic accidents and traffic delays. Along the major arterial, the desirable spacing between

Figure B-1

### MINIMUM DESIRABLE CORNER CLEARANCES AT SIGNALIZED AND UNSIGNALIZED INTERSECTIONS



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

Item	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

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

Source: Institute of Transportation Engineers.



median openings is 460 feet plus the length of an exclusive left turn lane required to provide storage for left-turning vehicles. The minimum spacing between median openings should be 275 feet plus the length of an exclusive left turn lane required to provide storage for left-turning vehicles.

It is recommended that the Village attempt to achieve over time a more desirable spacing of driveways and median openings along its major arterials as land along these arterials is developed and redeveloped. A reduction in the number of driveways and a modification in driveway locations should also be achieved. The standards, as previously presented, include 150-foot minimum and 250-foot desirable spacing between adjacent driveways, driveways located at median openings or offset from such openings by a minimum of 150 feet while continuing to meet minimum spacing requirements, 275-foot minimum and 460-foot desirable spacing between median openings with adequate storage for left-turning vehicles, and corner clearance of driveways to adjacent intersecting streets of a minimum 115 to 230 feet and a desirable 250 feet.

## RECOMMENDED ACCESS MANAGEMENT PLAN

A proposed access management plan for a portion of the S. 108th Street (STH 100 and USH 45) corridor between W. Janesville Road (STH 24) and W. Edgerton Avenue is shown in Map B-1. The plan recommends driveway and median closures and new shared driveways which, together, achieve, with few exceptions, the aforementioned desirable spacing standards. In most cases, minimum spacing standards are achieved. At one intersection, the plan initially recommended that the frontage road that intersects Ridge Road approximately 50 feet east of its intersection with S. 108th Street (STH 100 and USH 45) be relocated at least 150 feet from this intersection. However, the staff of the Village determined that the frontage road should remain because it appears impractical to remove a recently developed building on the parcel where the realignment would occur.

Typically, the recommended access management plan would be implemented over time as the Village considers and approves changes in land use. For example, the access management recommendations would be considered for implementation as existing residences are converted to planned commercial uses and as existing commercial properties propose expansion or redevelopment. As an alternative, the Village could elect to attempt to implement the access management plan in the short term on either the entire segment of S. 108th Street, or at selected locations. Such short-term implementation may require use of police power and compensation for right-of-way, parking lot changes, and construction. Some driveway modification implementation may be accomplished in the short term with voluntary cooperation of property owners, coupled with changes in the medians.

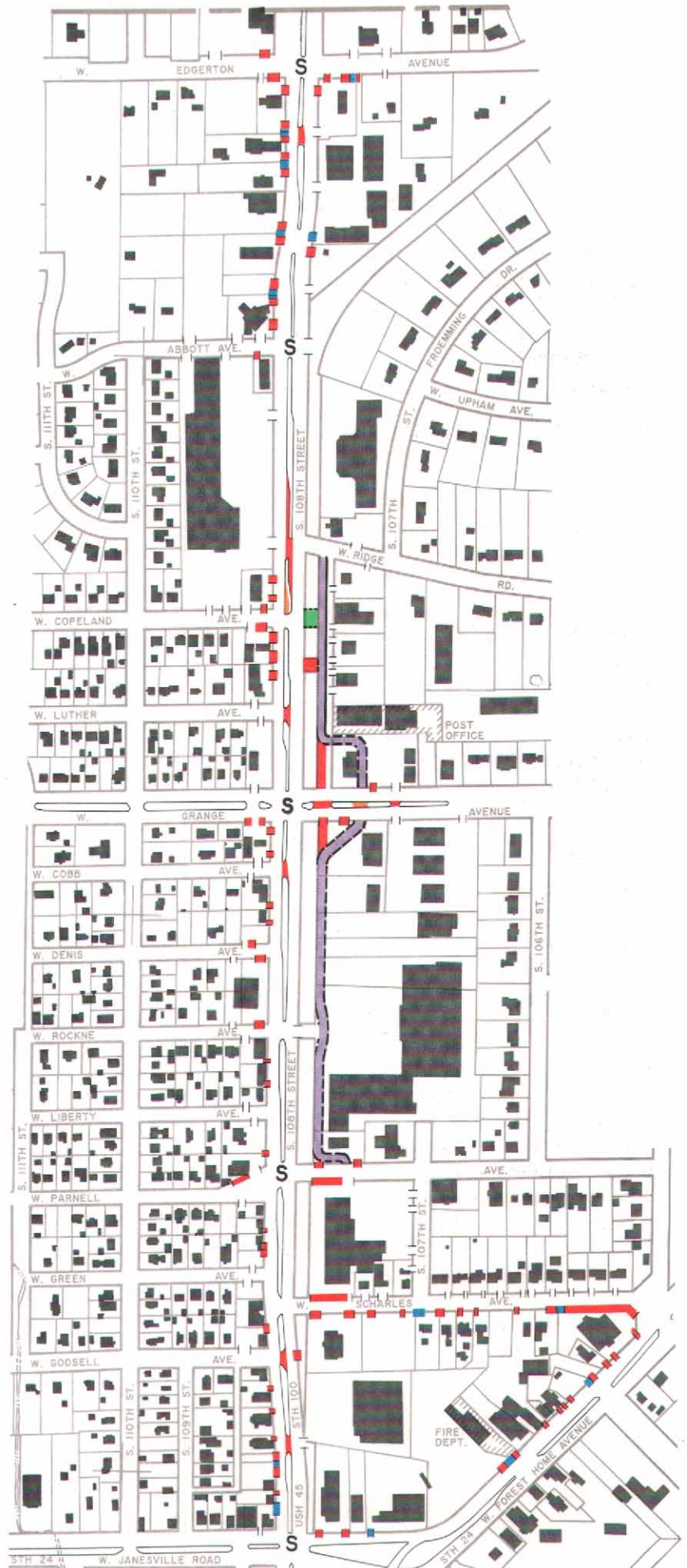
It is important to note that the plan recommends an access pattern adequate to serve the locally preferred land use plan for the S. 108th Street (STH 100 and USH 45) corridor, and that it may be necessary to approve land development and redevelopment proposals with interim access arrangements until the land use plan is fully implemented. There are two areas along the segment of S. 108th Street where three adjacent residences are proposed for conversion to commercial uses. In each of the two areas, the residences currently have one driveway to S. 108th Street. The other residence has a driveway to an intersecting local street. The access management plan proposes that, upon complete conversion to commercial land use, all access be provided from intersecting local streets. If each residence is converted to commercial land use individually, over time, interim access arrangements may be required. Individual access locations to each parcel may need to be maintained in the meantime, until all existing contiguous residential parcels are converted to commercial land use. At that time, access would be restricted to the single access point recommended in the plan. This is also the case for individual residential and commercial uses, especially along the east side of S. 108th Street, where such lands may be consolidated and developed into a planned shopping center with controlled access, as shown on the locally preferred land use plan.

The objective of the access management plan is to achieve, on the basis of the locally preferred land use plan, a desirable spacing between adjacent access locations. The access management plan should be regarded as a point of departure against which all proposed changes in access are evaluated. Any proposed departures from the plan should be fully justified, demonstrating that such departures are

Map B-1

**RECOMMENDED ACCESS MANAGEMENT  
PLAN FOR S. 108TH STREET (STH 100 AND  
USH 45) BETWEEN W. JANESVILLE ROAD  
(STH 24) AND W. EDGERTON AVENUE**

- LEGEND**
-  EXISTING DRIVEWAY
  -  EXISTING MEDIAN
  -  EXISTING / POTENTIAL TRAFFIC SIGNAL LOCATION
  -  PROPOSED DRIVEWAY / MEDIAN CLOSURE
  -  PROPOSED NEW SHARED DRIVEWAY
  -  PROPOSED NEW DRIVEWAY
  -  PROPOSED NEW STREET PAVEMENT
  -  PROPOSED ROADWAY

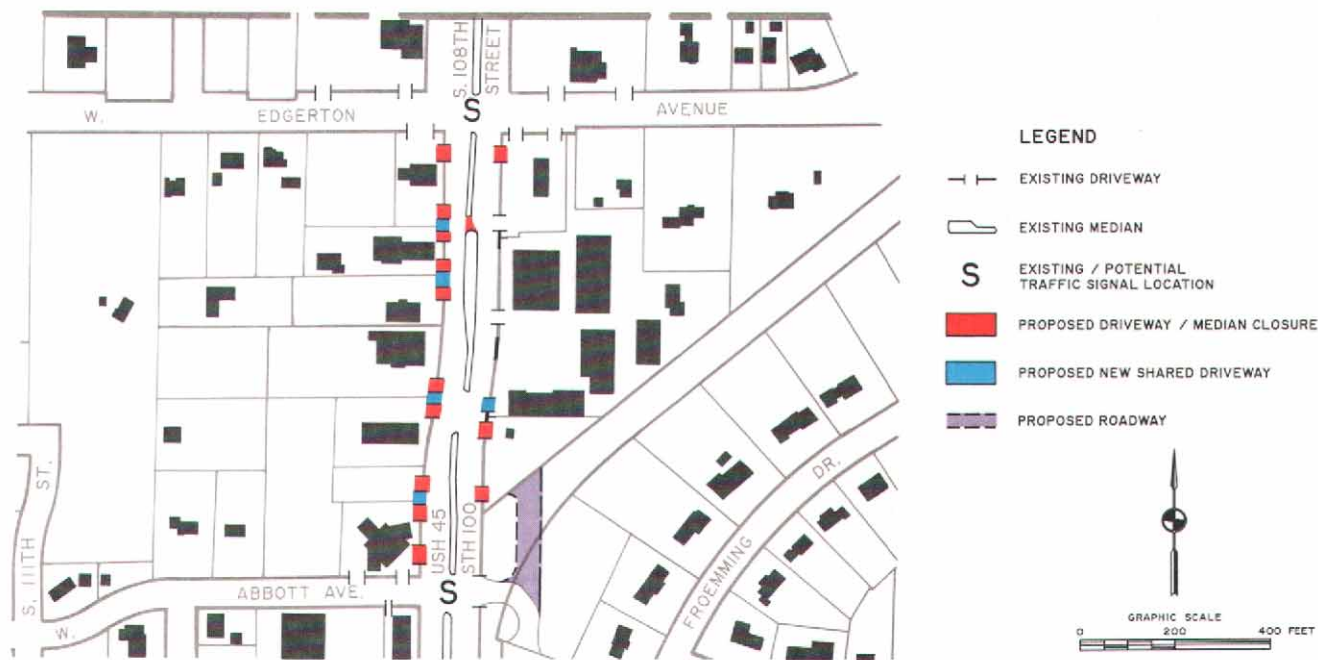


Source: SEWRPC.

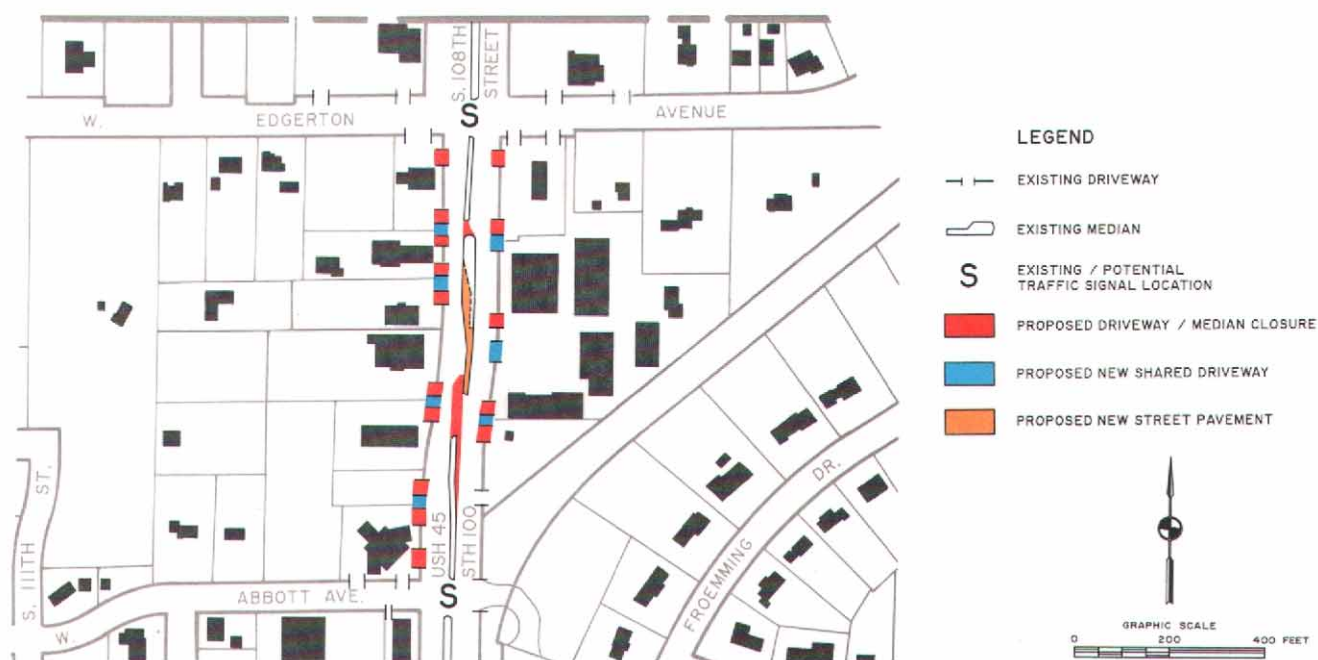
Map B-2

POTENTIAL OPTIONAL ACCESS MANAGEMENT PLANS FOR THE S. 108TH STREET (STH 100 AND USH 45) CORRIDOR BETWEEN W. ABBOTT AVENUE AND W. EDGERTON AVENUE

OPTION 1



OPTION 2



Source: SEWRPC.

consistent with the long-term attainment of the goals of the plan. Departures may be appropriate, if the land use plan is modified. In addition, it is possible that alternative access proposals may better serve a specific proposed development and still provide desirable spacing and achieve access objectives. As an example, two options for the plan for access management for S. 108th Street (STH 100 and USH 45) between W. Abbott Avenue and W. Edgerton Avenue, which meet access objectives, are shown on Map B-2.

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## Appendix C

### RESOLUTION OF THE VILLAGE OF HALES CORNERS PLAN COMMISSION ADOPTING THE RECOMMENDED LAND USE, URBAN DESIGN, AND TRANSPORTATION PLANS FOR SELECTED ARTERIAL STREET CORRIDORS IN THE VILLAGE OF HALES CORNERS

STATE OF WISCONSIN : MILWAUKEE COUNTY : VILLAGE OF HALES CORNERS

RESOLUTION NO. 93-01-P

(A Resolution adopting the Land Use,  
Urban Design, and Transportation Plans  
for Selected Arterial Street Corridors  
in the Village of Hales Corners.)

The Plan Commission of the Village of  
Hales Corners do ordain as follows:

WHEREAS, the Village of Hales Corners pursuant to the provisions of Section 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 Hales Corners; and

WHEREAS, the Village of Hales Corners requested the Southeastern Wisconsin Regional Planning Commission (SEWRPC) to prepare a land use, urban design, and transportation plan for selected arterial street corridors in the Village of Hales Corners; which plan includes:

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 corridor study area.
2. A forecast of growth and change.
3. Statements of development objectives, principles, standards, and related urban design criteria.
4. A land use plan, urban design plan, and transportation plan.
5. Recommendation of activities to implement the plans; and

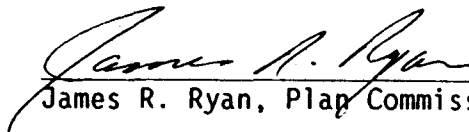
WHEREAS, the aforementioned forecasts; inventories; analyses; objectives, principles, and standards; land use, urban design, and transportation plans; and implementation recommendations are set forth in a published report entitled SEWRPC Community Assistance Planning Report No. 195, titled A Land Use, Urban Design, and Transportation Plan for Selected Arterial Street Corridors in the Village of Hales Corners, Milwaukee County, Wisconsin; and

WHEREAS, the Village Plan Commission considers these plans to be valuable guides to the future development and redevelopment of the Village of Hales Corners corridor study area.

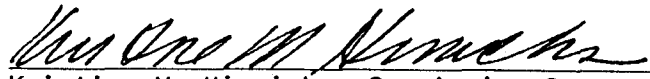
NOW, THEREFORE, BE IT RESOLVED, that pursuant to Section 62.23(3)(b) of the Wisconsin Statutes, the Village of Hales Corners Plan Commission hereby adopts the SEWRPC Community Assistance Planning Report No. 195, titled A Land Use, Urban Design, and Transportation Plan for Selected Arterial Street Corridors in the Village of Hales Corners, Milwaukee County, Wisconsin, and the attendant locally preferred land use plan, the urban design plan, and the transportation plan as guides for the future development and redevelopment of the Village of Hales Corners corridor study area.

BE IT FURTHER RESOLVED, that the Secretary of the Village of Hales Corners 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 Hales Corners and the Southeastern Wisconsin Regional Planning Commission.

PASSED and ADOPTED this 3rd day of March, 1993.

  
James R. Ryan, Plan Commission Chairman

Countersigned:

  
Kristine M. Hinrichs, Commission Secretary

(VILLAGE SEAL)

**Appendix D**

**RESOLUTION OF THE BOARD OF TRUSTEES OF THE VILLAGE OF  
HALES CORNERS ADOPTING THE RECOMMENDED LAND USE, URBAN  
DESIGN, AND TRANSPORTATION PLANS FOR SELECTED ARTERIAL  
STREET CORRIDORS IN THE VILLAGE OF HALES CORNERS**

STATE OF WISCONSIN       :       MILWAUKEE COUNTY       :       VILLAGE OF HALES CORNERS

RESOLUTION NO. 93 - 17

(A Resolution adopting the Land Use,  
Urban Design, and Transportation Plans  
for Selected Arterial Street Corridors  
in the Village of Hales Corners.)

The Village Board of the Village of  
Hales Corners do ordain as follows:

WHEREAS, the Village of Hales Corners, pursuant to the provisions of Section 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), plans for the physical development of selected arterial street corridors in the Village of Hales Corners, said plans embodied in SEWRPC Community Assistance Planning Report No. 195, A Land Use, Urban Design, and Transportation Plan for Selected Arterial Street Corridors in the Village of Hales Corners, Milwaukee County, Wisconsin; and

WHEREAS, the Village Plan Commission on the 3rd day of March, 1993, adopted SEWRPC Community Assistance Planning Report No. 195 and the attendant locally preferred land use plan, the urban design plan, and the transportation plan, and has submitted a certified copy of that resolution to the Board of Trustees of the Village of Hales Corners; and

WHEREAS, the Board of Trustees of the Village of Hales Corners concurs with the Village Plan Commission and the objectives and policies set forth in SEWRPC Community Assistance Planning Report No. 195.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Trustees of the Village of Hales Corners hereby adopts SEWRPC Community Assistance Planning Report No. 195 and the attendant locally preferred land use plan, the urban design plan, and the transportation plan as guides for the future development and redevelopment of the selected arterial street corridors in the Village of Hales Corners; and

BE IT FURTHER RESOLVED, that the Village Plan Commission shall annually review the community development plans and shall recommend extensions, changes, or additions to these plans which the Village Plan Commission considers necessary. Should the Village Plan Commission find that no changes are necessary, this finding shall be reported to the Village Board.

PASSED and ADOPTED this 12th day of April, 1993.

Countersigned:

James L. Meadows  
James L. Meadows, President Pro Tem

Kristine M. Hinrichs  
Kristine M. Hinrichs, Administrator/Clk.

(VILLAGE SEAL)