City of Rochester Hills
Master Land Use Plan 2006

The participation and cooperation of community leaders and residents in the preparation of the City of Rochester Hills Master Land Use Plan is greatly appreciated. In particular, we acknowledge the efforts of the following individuals:

MAYOR
Bryan Barnett

CITY COUNCIL
James Rosen, Council President
Barbara L. Holder, Council Vice President
Eric Ambrozaitis
Jim Duistermars
Greg Hooper
Linda Raschke
Ravi Yalamanchi

PLANNING COMMISSION
William Boswell
Deborah Brnabic
Gerard Detloff
Kathleen Hardenburg
Greg Hooper, Council Representative
Nicholas Kaltsounis
C. Neall Schroeder
David Reece

TECHNICAL COMMITTEE
Melinda Hill
Greg Hooper
Nicholas Kaltsounis
Linda Raschke
James Rosen

PLANNING and DEVELOPMENT DEPARTMENT
Ed Anzek, Director
Derek Delacourt, Deputy Director
Dan Casey, Economic Development Manager

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1. Introduction

This document sets forth the vision that the City leaders and residents have for the future of Rochester Hills, and serves as a guide to achieving that vision.

Community Planning History

The City of Rochester Hills and its predecessor, Avon Township, have engaged in land use planning and policymaking for over 40 years. The first Future Land Use plan was adopted by Avon Township in 1964. The Master Plan was revised and updated in 1974, 1979, 1992, and 1999. The Master Plan updates were completed as Rochester Hills entered the different phases of growth: from rural township, to a developing community on the suburban fringe, to a developed suburban Township, to a full-service City, and finally to a largely developed community.

The 1999 Master Plan focused on the dwindling areas that remained for development at that time. In 2006, remaining areas for development are even more limited. This Master Plan focuses on the development of the remaining infill parcels, which are often limited by their shape and size, location, surrounding development, and natural features (which require protection).

Basis for the Master Plan

The Municipal Planning Act of the State of Michigan (P.A. 285 of 1931, as amended) requires cities and Villages to plan and zone. The Act requires the Planning Commission to develop and adopt a master plan that, at a minimum, addresses certain specific issues.

> "*The municipal plan shall address land use issues and may project 20 years or more into the future. The plan shall include maps, plats, charts, and descriptive, explanatory, and other related matter and shall show the planning commission's recommendations for the physical development of the municipality. The plan shall also include those of the following subjects which reasonably can be considered as pertinent to the future development of the municipality: (a) A land use plan and program, in part consisting of a classification and allocation of land for agriculture, residences, commerce, industry, recreation, ways and grounds, public buildings, schools, soil conservation, forests, woodlots, open space, wildlife refuges, and other uses and purposes. (b) The general location, character, and extent of streets, railroads, airports, bicycle paths, pedestrian ways, bridges, waterways, and water front developments; flood prevention works, drainage, sanitary sewers and water supply systems, works for preventing pollution, and works for maintaining water levels; and public utilities and structures. (c) Recommendations as to the general character, extent, and layout for the redevelopment or rehabilitation of blighted areas; and the removal, relocation, widening, narrowing, vacating, abandonment, or changes or use or extension of ways, grounds, open spaces, buildings, utilities, or other facilities. (d) A zoning plan for the control of the height,*

area, bulk, location, and use of buildings and premises. (e) Recommendations for implementing any of its proposals. " (M.C.L. 125.36)

This document, then, is the Master Plan that has been developed and adopted by the City of Rochester Hills Planning Commission and accepted by the City Council pursuant to the Michigan Municipal Planning Act.

Purpose of a Master Plan

A master plan is used for a variety of purposes. At the most basic level, a master plan is used as the basis for a community's zoning ordinance. One of the requirements that make zoning constitutionally valid is that the ordinance be based on a comprehensive plan for the development of the jurisdiction. The Michigan Zoning Enabling Act (P.A. 110 of 2006, as amended) requires that zoning ordinances be based on a plan.

In context of the Michigan Zoning Enabling Act, the master plan is a study of the present and future growth of a municipality that identifies the land needed for various types of activities, including agriculture, single-family and multi-family residences, commerce, and industry. After a master plan is adopted, a municipality can then adopt a zoning ordinance to assure that land is available and allocated to meet the community's long term needs.

A common use of the master plan is for reference for zoning changes and special use permits. One of the primary considerations in a rezoning is compliance with the master plan and the future land use map.

Another important function of the master plan is giving guidance to developers and potential homeowners in making investment decisions. Consistent and reasonable application of the master plan by the City reduces risk and uncertainty in the real estate market.

The master plan provides guidance and coordination in the provision of public services. Understanding long-term growth patterns is helpful in making decisions for public investments, such as parks, and water and sewer infrastructure.

A master plan can be the basis for proactive projects and programs to improve a community. A fundamental part of the master planning process is the public involvement that forms the basis for the future land use plan and indicates the community's desires for its future and its long-term vision. The goals and objectives of a master plan reflect desires for physical development.

A master plan presents the vision of a community over the next 20 years, but also includes a number of specific, short term implementation activities intended to realize the overall vision of the Plan.

2. Demographics

This section of the master plan analyzes demographic and housing trends, based primarily on data from the Census Bureau and the Southeast Michigan Council of Governments (SEMCOG). The analysis provides regional context and comparisons with neighboring communities.

Demographic analysis is a fundamental element of master plans. Planning for future growth and development requires some consideration of "how much" - how many people will need City services, how much housing is affordable, or how many new houses will be built.

The intent of a demographic analysis is to paint a general picture of the community. The analysis identifies those demographic characteristics in which the community is different from the surrounding communities and the region. A differential in demographic characteristics may indicate issues or areas in which land use planning and public policies beyond the typical scope of a master plan are warranted.

The demographic analysis assesses trends for the following demographic characteristics:

- **Population**
  - Total population and Population Growth Rates
- **Age**
  - Age structure
  - Median age
  - Population under the age of 18
  - Population over the age of 65
- **Household Growth and Composition**
  - Number of households
  - Household composition
  - Household size
- **Housing**
  - Number of housing units
  - Occupancy
  - Tenancy
  - Types of housing
  - Age of housing
  - Value of housing

The demographic analysis concludes with an assessment of the effects of demographic trends on future growth and development patterns in the City.

Population

Total Population

Growth of a community's population is a primary force driving new development and redevelopment. Decline of a community's population can lead to abandoned buildings and blight. Understanding the community's population trend and

the regional context are necessary to develop an effective future land use plan. This section describes the City's historical population trend, analyzes the regional population growth context, and compares the City's population growth to that of neighboring communities.

Historical Population Trend

The City's historic population trend, based on the decennial census, is presented in Table and Figure 2.1.

Table 2.1
Historic Population Trend,
Rochester Hills, 1900 to 2000

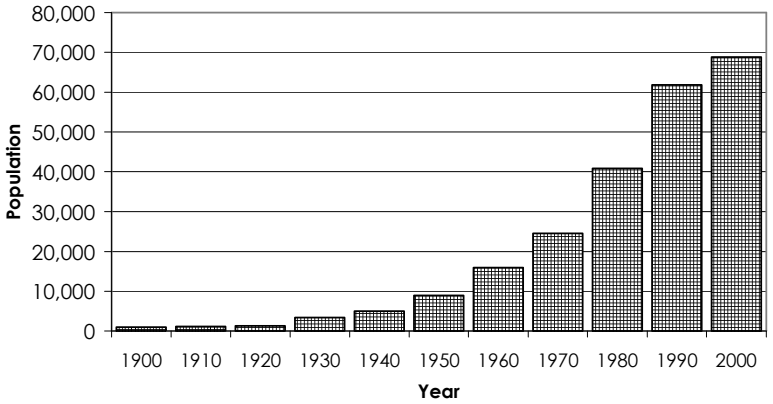
Year	Population	Population Increase	Percent Increase
1900	1,049		
1910	1,141	92	8.8%
1920	1,321	180	15.8%
1930	3,407	2,086	157.9%
1940	5,017	1,610	47.3%
1950	8,903	3,886	77.5%
1960	15,946	7,043	79.1%
1970	24,516	8,570	53.7%
1980	40,779	16,263	66.3%
1990	61,766	20,987	51.5%
2000	68,825	7,059	11.4%

Note: Data for 1900 through 1980 is the population for Avon Township, excluding the Village of Rochester.

Source: SEMCOG, data from US Census Bureau.

The City's largest numerical increases in population occurred from 1970 to 1980 and from 1980 to 1990. However, the largest percentage increases in population occurred from 1920 to 1930 and 1940 to 1960. The growth rate from 1990 to 2000 was the lowest since 1900 to 1910. The City's population trend should be considered in the regional context, which is presented in the next section.

Figure 2.1
Historic Population Trend,
Rochester Hills, 1900 to 2000



Source: McKenna Associates, Inc., with data from US Census Bureau.

Regional Population Trend

The regional population trend is presented in Table 2.2. The data show the percentage increase in population for each Census from 1970 through 2000. For the entire 30-year period, the City's growth has been significantly higher than the growth rate for the region, the State and the United States (US).

Table 2.2
Percent Increases in Census Count of Population, Rochester Hills, Region, Michigan, and US, 1970 to 2000

	Rochester Hills[1]	Oakland County	Detroit MSA[2]	SEMCOG Region[3]	Michigan	US
1970 to 1980	66.3	11.4	-3.8	-1.1	4.3	11.4
1980 to 1990	51.5	7.1	-3.3	-2.0	0.4	9.8
1990 to 2000	11.4	10.2	3.3	5.3	6.9	13.2
1970 to 2000	180.7	31.5	-3.8	2.1	11.9	38.4

[1] Data represents population of Avon Township in 1970 and 1980, and the City of Rochester Hills for 1990 and 2000.
[2] Detroit MSA includes the counties of Macomb, Oakland, and Wayne.
[3] SEMCOG Region includes the counties of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.
Source: SEMCOG, with data from the US Census Bureau.

From 1970 through 1990, both the Detroit MSA and the entire SEMCOG region experienced a decrease in total population, even though the State as a whole gained population. During this time period, the City of Rochester Hills more than doubled in total population, resulting from population redistribution in a region that was experiencing a net decline in total population. Suburbanization brought many new residents from older areas in the metropolitan area to newer suburbs, like Rochester Hills.

From 1990 to 2000, the region experienced an increase in total population. During this time period, the City's population growth exceeded that of Oakland County, the region, and the State of Michigan. The 1990 to 2000 growth rate in the City and the region was less than the overall population growth rate in the US.

Population Growth Comparisons

Population and population growth trends for Rochester Hills and surrounding communities are presented in Table 2.3. Over the 30-year period from 1970 to 2000, none of the adjacent communities had as large a population growth rate as Rochester Hills.

Table 2.3
Total Population and Population Growth Rates, Rochester Hills and Surrounding Communities, 1970 to 2000

Time Period	Rochester Hills[1]	Rochester	Auburn Hills[2]	Troy	Shelby Twp	Oakland Township
1970	24,516	7,054	12,646	39,419	29,467	4,793
1980	40,779	7,203	15,388	67,102	38,939	7,628
1990	61,766	7,130	17,076	72,884	48,655	8,227
2000	68,825	10,467	19,837	80,959	65,159	13,071
2004[3]	69,326	11,752	20,791	81,260	69,275	15,916
Percent Increase						
1970 to 1980	66.3	2.1	21.7	70.2	32.1	59.1
1980 to 1990	51.5	-1.0	11.0	8.6	25.0	7.9
1990 to 2000	11.4	46.8	16.2	11.1	33.9	58.9
2000 to 2004	0.7	12.3	4.8	0.4	6.3	21.8
1970 to 2000	180.7	48.4	56.9	105.4	121.1	172.7

[1] Data represents population of Avon Township in 1970 and 1980, and the City of Rochester Hills for 1990 and 2000.
[2] Data represents population of Pontiac Township in 1970 and 1980, and the City of Auburn Hills for 1990 and 2000.
[3] Data for 2004 SEMCOG's estimated population for October 2004.

Source: SEMCOG, with data from the US Census Bureau.

All the jurisdictions grew faster from 1970 to 1980 than they did from 1980 to 1990. Rochester Hills experienced another decline in population growth rate between 1980 to 1990 and 1990 to 2000, while all of the adjacent communities experienced an increase in population growth rate. Based on SEMCOG's estimated October 2004 population, Rochester Hill's growth rate continues to be lower than that of all adjacent communities, except Troy's.

Analysis

The City of Rochester Hills experienced large real and percentage increase in population for almost the entire 20th century. The City's rate of population growth has been generally slowing since the mid-1950s and 60s. Even during periods of regional population declines in the 1970s and 1980s, Rochester Hills continued to grow. Since the 1990s, though, the City's rate of growth has lagged behind that of adjacent communities, especially Oakland and Shelby Townships. The differential growth rates since 1990 suggests that Rochester Hills is approaching build-out (to be discussed in later chapters). Lower population growth suggests development pressures will be shifting and that a review of past land use policies is warranted.

Age

The age of a community's population has very real implications for planning and development, whether it be schools for population under the age of 18, or housing alternatives for empty nesters and elderly residents. This section analyzes the age of the City's population – based on age structure, median age, and percentage of the population under 18 and over 65 – and assesses the implications of the population's age on land use and development.

Common Measures of Age

The age analysis begins with three common measures of the age of a population. The first measure is the median age, which is the age at which one-half of the population is older and one-half of the population is younger. Median age is the most often used measure of age because it can be used to compare populations of different sizes. The second measure is the percentage of the total population that is under the age of 18. Individuals under the age of 18 are usually enrolled in the school system, or preparing to enter school, and thus require services not provided for the general population. The third measure is the percentage of the total population that is aged 65 and over. Many individuals approaching retirement age seek alternative housing. As individuals age, they may lose their ability to drive and public transportation can become a new but important issue. These three measures of community age are presented in Table 2.4.

Table 2.4
Median Age and Percentage of Total Population under 18 and over 65, US, Michigan, Region, Rochester Hills, and Surrounding Communities, 2000

	US	Michigan	SEMCOG Region[1]	Oakland County	Rochester Hills	Surrounding Communities[2]
Median Age	35.3	35.5	34.7	36.7	38.1	36.7
Under 18 (% of total population)	25.7	26.1	26.2	25.2	26.0	25.3
65 and older (% of total population)	12.4	12.3	11.7	11.3	10.6	9.8

[1] SEMCOG Region includes the counties of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.
[2] The surrounding communities include Auburn Hills, Oakland Township, Rochester, Shelby Township, and Troy.
Source: McKenna Associates, Inc., with data from US Census Bureau.

The City's median age, 38.1 years, is higher than that of surrounding communities, 36.7 years, Oakland County, 36.7 years, and the region, 34.7 years. The higher median age suggests that the City's population is relatively older. However, the City's population includes a higher percentage of individuals under the age of 18 than the population of the County and the surrounding communities. The City's population includes fewer individuals over the age of 65 than the County and the region.

The SEMCOG region has a lower median age, more individuals under the age of 18, and fewer individuals over the age of 65 than the State and the United States. Based on these measures, the region is relatively younger than would be generally expected of a metropolitan area. Within this younger region, Rochester Hills is slightly older.

Age Structure

Age structure refers to the portion of a community's population in each age group. This section first compares the City's age structure to that of the region and the surrounding communities. Subsequently, the change in the City's age structure from 1990 to 2000 is analyzed.

Age Structure Comparison

To compare the age structure of various communities, the population is divided into the following basic age groupings:

Age	*Age Group*
• Under 5:	Pre-school
• 5 to 17:	School age
• 18 to 44:	Family forming
• 45 to 64:	Mature families
• 65 and older:	Retirement

Table 2.5

Comparison of Age Groups, by Percentage of Total Population, US, Michigan, Region, Rochester Hills, and Surrounding Communities, 2000

Age	US	Michigan	SEMCOG Region[1]	Oakland County	Rochester Hills	Surrounding Communities[2]
Under 5	6.8	6.8	7.0	6.7	6.5	6.4
5 to 17	22.4	22.8	22.9	21.9	22.7	22.2
18 to 44	39.9	39.2	39.8	39.7	36.8	39.6
45 to 64	22.0	22.4	22.2	23.9	26.6	25.4
Over 65	12.4	12.3	11.7	11.3	10.6	9.8

[1] SEMCOG Region includes the counties of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.
[2] The surrounding communities include Auburn Hills, Oakland Township, Rochester, Shelby Township, and Troy.
Source: McKenna Associates, Inc., with data from US Census Bureau.

Rochester Hills and the surrounding communities have slightly fewer individuals in the under 5 age group relative to the region, but about the expected amount of individuals in the school age group based on the region's population. The City has fewer individuals in the family forming age group and more individuals in the mature families age group. The distribution of the population in the two family age groups results in the distribution of individuals in the pre-school and school age groups. Finally, the City has relatively fewer residents in the retirement age group.

The age structure of the City of Rochester Hills has several implications for planning and land use. First, the relatively fewer individuals in the pre-school age group suggests that long-term demand for school facilities will be less than the demand generated by current school age population. Secondly, as individuals in the mature families age group move towards retirement, their housing choices could have implications for the demand for new and different housing types. Finally, as the retirement age group increases in size, demand for services for senior citizens and elderly residents are likely to grow.

Change in Age Structure

The change in age structure is assessed by comparing the population in five-year age cohorts in 1990 to those in 2000. For example, those individuals in the 20 to 24 age cohort in 1990 would be in the 30 to 34 age cohort in 2000. If the size of the age cohort is smaller in 2000, then the cohort experienced some combination of mortality and out-migration. If the size of the cohort is larger in 2000, then the cohort experienced in-migration. The City's population by 5-year age cohort in 1990 and 2000 is presented in Table 2.6.

Table 2.6
Change in 5-Year Age Cohorts, Rochester Hills, 1990 to 2000

Age Cohort	1990 Population	2000 Population	1990 to 2000 Change in Cohort Size[1]
< 5	4,447	4,490	
5 to 9	4,654	5,084	
10 to 14	4,557	5,237	790
15 to 19	4,237	4,552	-102
20 to 24	3,537	3,093	-1,464
25 to 29	4,755	3,649	-588
30 to 34	5,767	4,681	1,144
35 to 39	5,944	5,962	1,207
40 to 44	5,993	6,443	676
45 to 49	4,556	6,109	165
50 to 54	3,176	5,658	-335
55 to 59	2,558	4,002	-554
60 to 64	2,238	2,540	-636
65 to 69	1,760	1,917	-641
70 to 74	1,203	1,834	-404
75 to 79	1,007	1,507	-253
80 to 84	707	1,020	-183
85 and older	670	1,047	-1,337

[1] Change in cohort size is the difference between the population in each group in 2000 and the population in the 10-year younger cohort in 1990.
Source: McKenna Associates, Inc., with data from US Census Bureau.

The cohort that was 10 to 14 in 2000 (under 5 in 1990) increased by 790 individuals, suggesting an in-migration of young families.

The cohorts that were 15 to 29 in 2000 (5 to 19 in 1990) decreased by 2,154 individuals. A decrease in these age cohorts corresponds to children leaving their parents' homes for college or moving out with their first jobs. Within these age groups, the *net* decrease was 2.2 percent for the 15 to 19 cohort (in 2000), 32.1 percent for the 20 to 24 cohort, and 13.9 percent for the 25 to 29 cohort.

The cohorts that were 30 to 39 in 2000 (20 to 29 in 1990) increased by 2,351 individuals, or 28.4 percent. The large increase in this age cohort suggests that the City provided housing opportunities for young adults and young families.

The cohorts that were 40 to 49 in 2000 (30 to 39 in 1990) increased by 841 individuals, or 7.2 percent. While this increase is smaller than that of the previous cohorts, the increase suggests that the City attracted individuals moving into the mature family age group.

The remaining age cohorts all exhibited a net decrease in population from 1990 to 2000. However, the mortality rate begins to increase for individuals aged 40 and over, making detailed findings difficult. However, the aging and retirement of the baby boom generation will have significant impacts across the US. At the state and national levels, paying for social security and Medicare for retiring boomers are major policy issues. At the local level, the future decisions of boomers about where to live in the US when they retire, what types of housing to live in, what to do with leisure time, will have profound impacts on local land use and development, as well as local services. Long term issues such as access to medical facilities, public transportation, and cemetery space will be affected by the baby boom generation.

The analysis of the change in age structure from 1990 to 2000 suggests that the City may lack adequate housing opportunities for young adults when first moving out on their own, but that there are ample housing opportunities for those in the family forming and mature family age groups. A more in-depth analysis of housing opportunities for different age groups is provided in a subsequent chapter of this Master Plan.

Household Growth and Composition

This section of the demographic analysis assesses the growth and composition of households in the City. Households are an important level of analysis because changes in the number of households drive the demand for increased (or decreased) housing. Households are also the basic purchasing unit that drives demand for retail sales and for retail offices.

Number of Households

The number of households in Rochester Hills increased from 22,353 in 1990 to 26,315 in 2000, an increase of 3,962 or 17.7 percent. The growth rate in households exceed the population growth rate of 11.4 percent, due to a decrease in the average household size, which is discussed in a following section.

Household Composition

Household composition includes a variety of demographic statistics, including the age and gender of the self-identified

householder, the number of children, and the number of seniors. Household composition information for Rochester Hills, the SEMCOG region, and the surrounding communities is presented in Table 7.

Married couple families constitute a relatively larger portion of the City's households, 62.8 percent, than of the region's households, 48.8 percent, and of the County's households, 54.2 percent. Female headed households with no husband present constitute a smaller portion of the City's households, 6.8 percent, than of the region's households, 14.2 percent and of the County's households, 9.5 percent.

The City's household composition is much closer to that of the region with householders living alone, 24.0 percent of the City's total households, and with households with an individual age 65 and older living alone, 8.4 percent of the City's total households.

The City has slightly more households with one or more individuals under the age of 18, 36.8 percent, than has the SEMCOG region, 35.8 percent of total households, and Oakland County, 34.5 percent. The City has slightly fewer households with an individual age 65 and older, 19.6 percent of the City's households, than has the region, 22.3 percent, and the County, 20.5 percent

The household composition data in Table 2.7 suggest that the City faces no out of the ordinary demographic issues. Conventional demographic issues, such as the needs of single parent female headed households or senior citizens living alone, are still relevant to the City

Table 2.7
Household Composition
Rochester Hills, Region, and Surrounding Communities, 2000

	SEMCOG Region[1]	Oakland County	Rochester Hills	Surrounding Communities[2]
Total Number of Households	1,845,313	471,115	26,315	71,576
Number of Married Couple Households	900,201	255,361	16,534	43,861
-Percent of total households	48.8	54.2	62.8	61.3
Number of Female Headed Households with No Husband Present	261,308	44,598	1,780	4,953
-Percent of total households	14.2	9.5	6.8	6.9
Householder Living Alone	502,457	128,807	6,305	16,990
-Percent of total households	27.2	27.3	24.0	23.7
Householder 65 and Older Living Alone	169,511	39,910	2,199	4,926
-Percent of total households	9.2	8.5	8.4	6.9
Number of Households with an Individual Under 18	660,885	162,384	9,676	25,762
-Percent of total households	35.8	34.5	36.8	36.0
Number of Households with an Individual 65 or Older	412,271	96,585	5,148	13,475
-Percent of total households	22.3	20.5	19.6	18.8
Average Household Size	2.58	2.51	2.59	2.62
Average Family Size	3.16	3.09	3.11	3.16

[1] *SEMCOG Region includes the counties of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.*

[2] *The surrounding communities include Auburn Hills, Oakland Township, Rochester, Shelby Township, and Troy.*

Source: McKenna Associates, Inc., with data from US Census Bureau.

Household Size

Information for the average sizes of households and families is presented in Table 2.7. The City's average household size, 2.59 persons per household, is larger than the region but lower than the surrounding communities. The City's average family size, 3.11 persons per family, is lower than the region and the surrounding communities, but higher than Oakland County. The average sizes of the City's households and families do not suggest any out of the ordinary planning issues.

Housing

Understanding housing issues is important because the need for housing, and the development of houses, mark much of the urban landscape and provide much of the focus for master plans. According to SEMCOG's analysis, the land area developed for residences in the City increased 12.4 percent from 1990 to 2000, occupying 58 percent of the City's land area.

Number of Housing Units

The total number of housing units in the City increased from 23,535 in 1990 to 27,263 in 2000. The comparison among the growth rates for population, households, and housing is presented in Table 2.8.

Table 2.8
Growth in Population, Households, and Housing Units
Rochester Hills, 1990 to 2000

	1990	2000	Increase 1990 to 2000	Percent Increase
Population	61,766	68,825	7,059	11.4
Households	22,353	26,315	3,962	17.7
Housing Units	23,535	27,263	3,728	15.8

Source: McKenna Associates, Inc., with data from US Census Bureau.

The increase in households exceeded the increase in population because the average household size decreased, as described in Table 2.8. The increase in housing units was lower than the increase in households because the total number of vacant housing units decreased, as discussed in the following sections. The intent of this section is to understand the changing character of the City's housing stock.

Housing Type

The first housing characteristic under consideration is the type of housing. The available census data on housing is categorized into the following types:

- One-family, detached
- One-family, attached
- Two-family / duplex
- Multi-unit apartment
- Mobile homes
- Other units (includes boats, RVs, etc.)

To understand the City's housing stock, the change in housing type is analyzed. Secondly, the types of housing in the City are compared to those in the region and the surrounding area.

Change in Housing Type

The types of housing in the City in 1990 and 2000 are described in Table 2.9. From 1990 to 2000, the total number of housing units in the City increased by 15.9 percent. The number of one-family detached and two-family / duplex housing units increased at a higher rate than the total number of housing units. The City added housing units in one-family attached, multi-unit apartments, and mobile homes, but at a lower rate than total housing growth.

Table 2.9
Changes in Types of Housing, Rochester Hills, 1990 and 2000

	Number of Housing Units, 1990	Number of Housing Units, 2000	Increase 1990 to 2000	Percent Increase 1990 to 2000	Percent of Total Housing Growth
Total	23,535	27,272	3,737	15.9	100.0
One-family, detached	14,813	18,052	3,239	21.9	86.7
One-family, attached	2,360	2,508	148	6.3	4.0
Two-family / duplex	60	70	10	16.7	0.3
Multi-unit apartment	4,818	5,208	390	8.1	10.4
Mobile homes	1,359	1,425	66	4.9	1.8
Other units	125	9	-116	-92.8	-3.1

Source: McKenna Associates, Inc., with data from US Census Bureau.

From 1990 to 2000, one-family detached housing constituted 86.7 percent of the total housing growth in the City, and apartments accounted for 10.4 percent of growth. The data show that the City's housing stock and the trend in housing development is primarily one-family detached.

Housing Type Comparison

The types of housing in the City are compared to housing types in the region and the surrounding area in Table 2.10. In 2000, one-family detached housing constituted 66.2 percent of the total housing in the City, which was less than the rate for the region and slightly more than the rate for the surrounding communities.

One family attached housing (townhouses) was a higher portion of the City's total housing, 9.2 percent, than the portion of housing in the region, 5.6 percent, Oakland County 5.5 percent, and the surrounding area, 6.3 percent. Mobile homes also constituted a higher portion of the City's total housing, 5.2 percent, than the portion of housing in the region, 3.6 percent, the County, 3.5 percent, and the surrounding area, 4.2 percent.

Duplexes account for a lower portion of the City's total housing, 0.3 percent, than the portion of the region's housing, 3.8 percent, the County's housing, 1.2 percent, and the surrounding area's housing, 0.8 percent. Apartments constitute a lower portion of the City's total housing, 19.1 percent, than the region's housing, 18.9 percent, but more than the County's housing 21.2 percent, and the surround area's housing, 23.0 percent.

Table 2.10
Comparison of Housing Types as a Percentage of Total Housing Units, Rochester Hills, Region, and Surrounding Area, 2000

	SEMCOG Region[1]	Oakland County	Rochester Hills	Surrounding Communities[2]
One-family, detached	68.1	68.5	66.2	65.7
One-family, attached	5.6	5.5	9.2	6.3
Two-family / duplex	3.8	1.2	0.3	0.8
Multi-unit apartment	18.9	21.2	19.1	23.0
Mobile homes	3.6	3.7	5.2	4.2
Other units	0.0	0.0	0.0	0.0

[1] SEMCOG Region includes the counties of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.
[2] The surrounding communities include Auburn Hills, Oakland Township, Rochester, Shelby Township, and Troy.
Source: McKenna Associates, Inc., with data from US Census Bureau.

The City's housing stock includes about the same amount of one-family housing as expected based on the housing stock in the region and the surrounding communities. The data in Table 10 show that the City's housing stock has relatively more townhouses and mobile homes, and relatively fewer duplexes and apartments. Projections of future housing needs are discussed in the Housing Analysis chapter.

Occupancy and Tenure

Occupancy refers to the amount of housing that was used as a residence at the time of the Census. Housing units that were not used as a residence are identified as vacant units. Tenure indicates that housing was occupied by the owner or rented to a tenant. Occupancy and tenure data for the City, the region, and the surrounding communities is presented in Table 2.11.

Table 2.11
Occupancy and Tenure
Rochester Hills, Region, and Surrounding Area, 2000

	SEMCOG Region[1]	Oakland County	Rochester Hills	Surrounding Communities[2]
Occupied Housing (percent of total housing)	94.5	95.8	96.5	96.0
• Owner Occupied (percent of occupied housing)	71.8	74.8	79.2	75.1
• Renter Occupied (percent of occupied housing)	28.2	25.2	20.8	24.9
Vacant Housing (percent of total housing)	5.5	4.2	3.5	4.0
• For Rent (percent of total housing)	1.9	1.5	1.2	1.5
• For Sale (percent of total housing)	1.1	1.0	1.2	1.0
• Rented of sold, not occupied (percent of total housing)	0.8	0.5	0.2	0.6
• Seasonal, Recreational, or Occasional (percent of total housing)	0.7	0.9	0.7	0.7
• For Migrant Workers (percent of total housing)	0.0	0.0	0.0	0.0
• Other Vacant (percent of total housing)	1.0	0.4	0.2	0.2

[1] SEMCOG Region includes the counties of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.
[2] The surrounding communities include Auburn Hills, Oakland Township, Rochester, Shelby Township, and Troy.
Source: McKenna Associates, Inc., with data from US Census Bureau.

In 2000, the City had a higher owner-occupancy rate, 79.2 percent, than the region, 71.8 percent, the County, 74.8 percent, and the surrounding area, 75.1 percent. The City had a lower vacancy rate, 3.5 percent, than the region, 5.5 percent, the County, 4.2 percent, and the surrounding area, 4.9 percent.

The lower rate of renter-occupied housing suggests that the City has fewer opportunities for young adults first moving out on their own. The lower vacancy rate suggests that the City is a popular community in which to live

Age of Housing

The age of the City's housing stock is presented in Table 2.12. The largest percentage of the City housing was constructed in the 1980s. As of 2000, 19.7 percent of the City's housing had been built since 1999.

Table 2.12
Age of Housing,
Rochester Hills, 2000

	Number of Housing Units	Percent of Total
Total:	27,272	100.0
Built 1999 to March 2000	431	1.6
Built 1995 to 1998	1,987	7.3
Built 1990 to 1994	2,964	10.9
Built 1980 to 1989	8,733	32.0
Built 1970 to 1979	6,653	24.4
Built 1960 to 1969	2,566	9.4
Built 1950 to 1959	2,280	8.4
Built 1940 to 1949	924	3.4
Built 1939 or earlier	734	2.7

Source: McKenna Associates, Inc., with data from US Census Bureau.

The median age of the City's housing stock is compared to that of Oakland County and each of the surrounding communities in Table 2.13. The median age of the City's housing stock is 23 years (built in 1981), which is newer than the median age of Oakland County and all of the surrounding communities, except Oakland and Shelby townships.

Table 2.13
Median Age of Housing, 2000,
Rochester Hills, Oakland County, and Surrounding Communities

Oakland County	1970
Shelby Charter Township	1982
Oakland Charter Township	1985
Auburn Hills	1981
Rochester	1972
Rochester Hills	1981
Troy	1975

Source: McKenna Associates, Inc., with data from US Census Bureau.

The median age of housing shows the regional growth pattern. Suburbanization continues to move outward from Detroit, to the north and the east of Rochester Hills.

Housing Value

Housing value assessment considers the value of owner-occupied homes and the rent asked for renter occupied dwellings. The data is based on responses to the one-in-six long form from the 2000 Census.

Median Housing Value

The data for median housing value represent "specified owner occupied housing units", which are defined by the Census Bureau as "owner occupied housing units described as either a one family home detached from any other house or a one family house attached to one or more houses on less than 10

acres with no business on the property." The median housing value in the City, the region, and the surrounding communities is presented in Table 2.14.

Table 2.14
Median Value of Specified Owner Occupied Housing Units
Rochester Hills, Region, and Surrounding Area, 1999

SEMCOG Region[1]	Oakland County	Rochester Hills	Surrounding Area[2]
$183,376	$243,425	$261,900	$262,907

[1] SEMCOG Region includes the counties of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.
[2] The surrounding communities include Auburn Hills, Oakland Township, Rochester, Shelby Township, and Troy.
Source: McKenna Associates, Inc., with data from US Census Bureau.

The median value of owner occupied housing in Rochester Hills is 42.8 percent higher than that in the region, and 7.6 percent higher than the median value of housing in the County. The City's median housing value is 0.4 percent lower than the median housing value in the surrounding area.

Affordability of Owner Occupied Housing

Housing is considered to be affordable when the total annual cost for mortgage payments, taxes, and utilities is under 30 percent of gross annual household income. Affordability data for selected owner occupied housing with a mortgage is presented in Table 2.15. "Selected monthly owner cost" is defined by the Census Bureau as, "the sum of payment for mortgages, real estate taxes, various insurances, utilities, fuels, mobile home costs, and condominium fees."

Table 2.15
Selected Monthly Owner Costs as a Percentage of Household Income in 1999,
Rochester Hills, Region, and Surrounding Communities

	SEMCOG Region[1]	Oakland County	Rochester Hills	Surrounding Area[2]
Less than 30 percent[3]	76.9	77.4	81.6	79.3
30 to 34 percent[3]	6.3	6.5	4.9	6.2
35 to 39 percent[3]	4.0	4.0	3.7	3.7
40 to 49 percent[3]	4.3	4.4	3.7	4.1
50 percent or more[3]	8.0	7.5	5.8	6.6
Median[4]:	19.9	20.0	19.3	19.5

[1] SEMCOG Region includes the counties of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.
[2] The surrounding communities include Auburn Hills, Oakland Township, Rochester, Shelby Township, and Troy.
[3] The value given is the percentage of selected owner occupied houses with a mortgage.
[4] "Median" is the median selected monthly owner cost as a percentage of household income in 1999 for each area.
Source: McKenna Associates, Inc., with data from US Census Bureau.

Based on the definition of affordable housing cited above, owner-occupied housing in Rochester Hills is affordable to a higher percentage of homeowners, 81.6 percent, than in the region, 76.9 percent, the County, 77.4 percent, and the surrounding area, 79.3 percent. However, the relatively higher cost of housing in Rochester Hills (see Table 2.14) makes homeownership unaffordable to many of the region's households.

Median Rent

The median monthly rent in 1999 in Rochester Hills, the region, and the surrounding communities are presented in Table 2.16. The data in the table represent those renters paying cash rent in 1999.

Table 2.16
Median Contract Monthly Rent, 1999
Rochester Hills, Region, and Surrounding Area

SEMCOG Region[1]	Oakland County	Rochester Hills	Surrounding Area[2]
$516	$643	$733	$695

[1] SEMCOG Region includes the counties of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.
[2] The surrounding communities include Auburn Hills, Oakland Township, Rochester, Shelby Township, and Troy.
Source: McKenna Associates, Inc., with data from US Census Bureau.

The median rent in Rochester Hills, $733, was 42.1 percent higher than the median rent in the region, 14.0 percent higher than the median rent in the County, and 5.5 percent higher than the median rent in the surrounding communities.

Affordability of Monthly Rent

Housing is considered to be affordable when the total annual cost for rent and utilities is under 30 percent of gross annual household income. Affordability data for renter occupied housing paying a cash rent is presented in Table 2.17. The Census Bureau defines "Gross rent" as, "The amount of the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid for by the renter (or paid for the renter by someone else). Gross rent is intended to eliminate differentials which result from varying practices with respect to the inclusion of utilities and fuels as part of the rental payment."

Table 2.17
Gross Rent as a Percentage of Household Income in 1999,
Rochester Hills, Region, and Surrounding Area

	SEMCOG Region[1]	Oakland County	Rochester Hills	Surrounding Area[2]
Less than 30 percent	58.1%	62.9%	62.6%	68.8%
30 to 34 percent	6.7%	7.1%	5.9%	6.7%
35 to 39 percent	4.8%	4.7%	4.8%	4.2%
40 to 49 percent	6.2%	6.1%	6.4%	5.0%
50 percent or more	17.9%	14.8%	15.0%	11.6%
Not computed	6.3%	4.4%	5.3%	3.8%

[1] SEMCOG Region includes the counties of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.
[2] The surrounding communities include Auburn Hills, Oakland Township, Rochester, Shelby Township, and Troy.
[3] The value given is the percentage of renters paying cash rent.
Source: McKenna Associates, Inc., with data from US Census Bureau.

Rental housing in the City is about as affordable as to be expected, based on the rate of affordability in the region and Oakland County. At the time of the 2000 Census, rental housing was not affordable for 37.4 percent of the City's renter households. In addition, the relatively high rents (see Table 2.16) makes rental living in Rochester Hills unaffordable to many households in the region.

Fair Market Rent

Each year the National Low Income Housing Coalition publishes its assessment of housing affordability for counties across the US. Their 2003 findings for Oakland County are:

- In Oakland County, an extremely low income household (earning $20,010, which is 30% of the Area

Median Income of $66,700) can afford monthly rent of no more than $500, while the Fair Market Rent for a two bedroom unit is $801.

- A minimum wage earner (earning $5.15 per hour) can afford monthly rent of no more than $268.
- An SSI recipient (receiving $552 monthly) can afford monthly rent of no more than $166, while the Fair Market Rent for a one-bedroom unit is $663.
- In Oakland County , a worker earning the Minimum Wage ($5.15 per hour) must work 120 hours per week in order to afford a two-bedroom unit at the area's Fair Market rent.
- The Housing Wage in Oakland County is $15.40. This is the amount a full time (40 hours per week) worker must earn per hour in order to afford a two-bedroom unit at the area's Fair Market rent. This is 299% of the minimum wage ($5.15 per hour). Between 2002 and 2003 the two-bedroom housing wage increased by 3.89%.
- A unit is considered affordable if it costs no more than 30% of the renter's income.

The above findings are based on overall figures for Oakland County. As discussed previously, the City's median rent in 1999 was 14.0 percent higher than the median rent in the County. It can be assumed that affordable rental housing is Rochester Hills is proportionately less affordable than in the County as a whole.

Demographic Analysis: Summary and Conclusions

Summary

The preceding sections have identified demographic characteristics of the City that differ from those of the region and the surrounding communities. The primary findings of the demographic analysis are:

1. The City experienced large real and percentage population increases for almost every decade in the 20th century.
2. The City's rate of population growth has generally been slowing since the mid-1950s and 60s.
3. Since 1990, the City's rate of population growth has lagged behind that of adjacent communities suggesting that the City is approaching build-out.
4. The City's non-white population increased from 1990 to 2000, but the City remained less diverse, with non-whites as a lower portion of the population, than in the region and the surrounding communities.
5. Less of the City's population is black than is the population of the region and the surrounding communities.
6. The population of the City and the surrounding communities includes a higher rate of Asians than the population of the region. For Rochester Hills, the majority of the Asian population is Asian Indians and Chinese (excluding Taiwanese).

7. Relative to the region as a whole, the City's population includes fewer individuals in the preschool, family-forming and retirement age groups, and more individuals in the mature families age group.
8. The change in the City's age structure from 1990 to 2000 suggests that there were less opportunities for young adults to find housing when first moving out on their own, but that there were adequate housing opportunities for those in the family forming and mature family age groups.
9. Relative to the region, the City's housing stock includes fewer one family detached housing units, and more one family attached housing units (townhouses) and mobile homes.
10. The City has a higher rate of owner-occupancy than the region and the surrounding communities.
11. The median value of owner-occupied housing in the City is 42.8 percent higher than that in the region, and 0.4 percent less than that in the surrounding communities.
12. The relatively higher value of housing makes homeownership in Rochester Hills unaffordable to many households in the region.
13. The median rent in the City is higher than that in region and the surrounding communities.
14. Rents are more affordable to renters than is the rent in the region, but less affordable than is the rent in the surrounding communities.
15. The median rent in the City is not affordable to the region's low income households.

Conclusions

The primary findings of the demographic analysis have several implications for the City's land use and development policies.

1. Previous land use and development planning and policies were adopted and implemented in the context of a growing community. As the City approaches build-out, a re-evaluation of land use and development planning and policies is warranted. Infill development, redevelopment, and preservation of remaining open spaces will likely become more important.
2. The City's racial diversity increased from 1990 to 2000, the City's population will still relatively less non-white than Oakland County and the SEMCOG region. The City should to decide to what degree increasing racial diversity should be a planning priority.
3. The City's population includes relatively more Asians than does the population of the County and the region. The majority of the Asian population is Asian Indians and Chinese (excluding Taiwanese). The Master Plan should consider to what degree, if any, measures are needed to assure that needs and views of these large racial minorities are incorporated into the City's planning program.
4. The City's population includes relatively fewer children under the age of five, but the trend from 1990 to 2000 suggests that in-migration will bring additional children in this age cohort over the next 10 years. Without a firm understanding of the number of school age children, the implications for land use planning and polices can not be fully assessed. Monitoring the

school age population through enrollment records is warranted to determine if this age cohort is increasing over time.

5. The higher percentage of the population in the mature families age group indicates that issues of retirement and aging will become more important. Demand for senior services will likely increase in the future. The aging of the City's population may result in housing turnover as empty nesters opt for alternative housing opportunities, such as single-story housing, smaller housing sizes, or condominium developments requiring less owner maintenance. Maintaining property values if housing turn over increases and providing alternative housing opportunities for retiring residents should become important policy considerations for the City.

6. The City's owner-occupied housing is relatively affordable to residents. However, there are fewer housing opportunities for younger households and for lower income households. The City should decide to what degree increasing the diversity of housing opportunities for the maturing children of residents and for the lower income workers in the City should be a priority.

3. Existing Conditions

This section presents a narrative of the existing land use pattern, circulation system, infrastructure, public services, and community facilities for Rochester Hills. The existing land use analysis describes what uses are on the ground in the City at this moment in time, while the existing circulation, infrastructure, public services and community facilities analysis describes current road and infrastructure conditions and public buildings in the City.

The first step in conducting an existing land use survey is to define land use categories. A field survey is then completed, and a map is created to determine the amount of land in each category. The existing land use map also serves as the basis for completing an existing land use analysis. The existing land use analysis examines land use patterns and trends, redevelopment opportunities, and other specific land use issues.

Existing Land Use

A parcel-by-parcel inventory of existing land uses was completed by McKenna Associates in the late fall of 2004. The Existing Land Use Map, presented on the following page, was created based on that inventory. The Existing Land Use Map on page 3.3 indicates that Rochester Hills is entering a new phase in its development. By and large, the City is now a mature community, with few large tracts of vacant land available for development. Further, the vacant land that is left often contains natural features such as steep slopes, wetlands, or floodplains that serve as development constraints.

Comparing the results of the 2004 existing land use inventory against an inventory completed in 1998 highlights the changes Rochester Hills has experienced over the past years. It must be noted that the land use designations used in the 2004 land use survey are more detailed than those used in the previous 1998 survey. For instance, the 2004 survey distinguishes between owner-occupied attached single-family dwelling units and multiple family apartment-style dwelling units, and different types of commercial land uses are now identified, such as neighborhood, community, and regional commercial. Other categories have been renamed or reorganized to clarify what use is being inventoried. The category correlations between the 2004 and the 1998 surveys are listed along with the results of the surveys in Table 3.1.

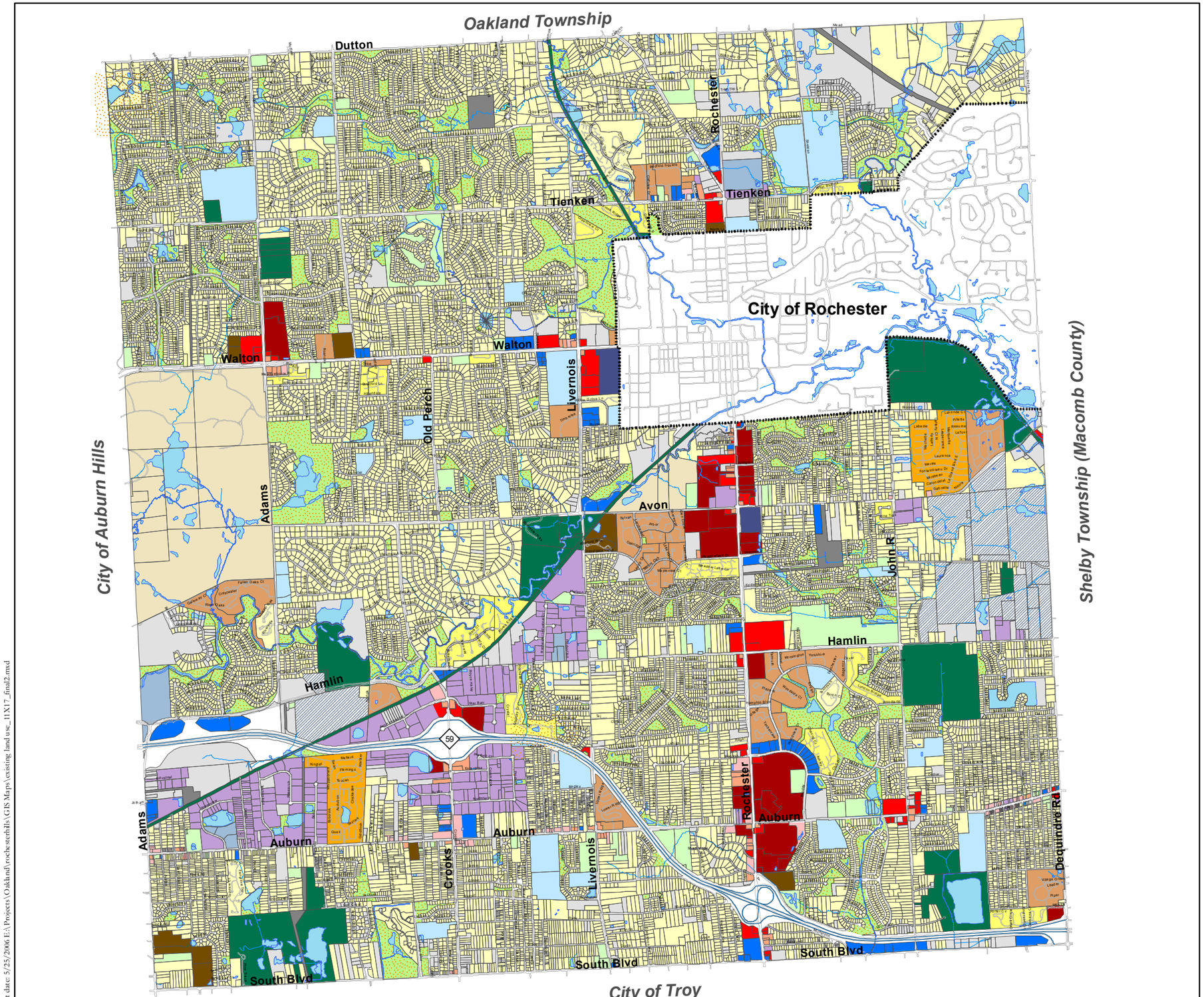
Table 3.1 – Existing Land Use by Acres 1998-2004
City of Rochester Hills

Land Use 1998	*Acres*	*% Total*	*Land Use 2004*	*Acres*	*% Total*	**Numeric Change**	**% Change 1998-2004**
Single Family Residential	8,691.09	41.26%	Single Family Residential	9,077.76	43.1%	386.67	4.4%
Multiple Family Residential	1,145.27	5.44%	*Total Non-Single Family Residential*	1,142.55	5.4%	-2.72	-0.2%
			Attached Single Family	*331.29*	*1.6%*		
			Multiple Family	*481.15*	*2.3%*		
			Manufactured Home Park	*220.28*	*1.0%*		
			Senior Housing	*109.83*	*0.5%*		
Total Commercial	602.53	2.85%	*Total Commercial*	646.69	3.1%	44.16	7.3%
Retail Commercial	*504.09*	*2.38%*	Neighborhood Commercial	*53.23*	*0.3%*		
Automotive Commercial	*98.44*	*0.47%*	Community Commercial	*199.83*	*0.9%*		
			Regional Commercial	*326.89*	*1.5%*		
			Service Commercial	*66.74*	*0.3%*		
Office Commercial	155.24	0.74%	Professional Office	230.87	1.1%	75.63	48.7%
Office Research	59.17	0.28%	Office Research	64.17	0.3%	5.0	8.5%
Total Industrial	764.07	3.6%	Industrial	672.11	3.2%	-91.96	-0.4%
Light Industrial	*667.35*	*3.17%*					
Heavy Industrial	*96.72*	*0.46%*					
Special Purpose	1,089.02	5.17%	Higher Education	948.73	4.5%	-140.29	-12.9%
Total Public	2,706.18	14.56%	Total Public	3,503.65	16.6%	757.54	29.5%
Other Public	*1,359.59*	*6.46%*	*Public/Semi-Public*	*655.32*	*3.2%*		
Quasi-Public	*1,346.82*	*6.39%*	*Park*	*954.35*	*4.5%*		
Institutional	*361.40*	*1.72%*	*Open Space*	*1,231.05*	*5.8%*		
			Institutional	*40.73*	*0.2%*		
			School	*505.73*	*2.4%*		
			Utility	*116.47*	*0.6%*		
Right-of-Way	2,712.56	12.88%	Right-of-Way	2,829.98	13.4%	217.42	8%
Vacant	2,775.65	13.18%	Vacant	1,945.90	9.2%	-1,096.57	-29.9%
TOTALS:	**21,062.41**	**100%**		**21,062,41**	**100%**		

Existing Land Use

Draft

City of Rochester Hills, Michigan



- Single Family Residential
- Attached Single Family Residential
- Multiple Family Residential
- Manufactured Home Community
- Senior Housing
- Higher Education
- Institutional

- Neighborhood Commercial
- Service Commercial
- Community Commercial
- Regional Commercial
- Office
- Office Research
- Vacant

- Landfill
- Industrial
- Park
- Public/Semi Public
- Open Space
- Utility
- School
- Surface Water

Base Map Source: City of Rochester Hills GIS, 2004
Data Source: McKenna Associates, Inc., 2004

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McKenna Associates Incorporated

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Land Use Designations

The following section describes each of land use categories used in the survey and outlines where those land uses are generally found in the community.

SINGLE FAMILY RESIDENTIAL. The single family residential land use category includes detached residential dwelling units located in subdivisions or site condominiums, as well as dwelling units on unplatted acreage parcels. This is the single largest land use category in the City, covering approximately 9,075 acres of land.

While all single family residences are included in one category on the land use survey, significant differences exist in the type and style of single family residential developments found in various locations throughout the City. The type and style of single family homes reflects the year in which they were constructed. For instance, single family neighborhoods located south of M-59 and west of Rochester Road and in the Old Town are older, have smaller homes, and feature gridiron streets, while neighborhoods elsewhere in the City are laid out in a more suburban fashion, with larger homes and feature curvilinear streets and cul-de-sacs.

Please refer to the Housing Analysis in later in this chapter for a detailed analysis of the City's housing stock.

ATTACHED SINGLE FAMILY RESIDENTIAL. This is a new category used in this land use survey, and includes attached owner-occupied dwelling units. These types of uses were included in the multiple family residential land use category in the 1998 survey. This category can include a broad range of housing types, including dwelling units in apartment-style buildings, townhomes, or duplex units and covers approximately 330 acres in various locations throughout the City. In general, these types of residential dwelling units are found along major roads in the southern two-thirds of the City (south of Walton Road).

MULTIPLE FAMILY RESIDENTIAL. Multiple family residential land uses include for-rent apartments, and cover approximately 480 acres.

MANUFACTURED HOME COMMUNITY. This new land use designation was included under multiple family residential in the 1998 survey. Land uses included in this category include manufactured home parks. Manufactured home communities cover approximately 220 acres in the City, and are found in two locations. One community is located on the north side of Avon Road between John R and Dequindre Roads, and one community is located on the north side of Auburn Road between Crooks and Adams Roads.

SENIOR HOUSING. Senior housing land uses include housing for citizens generally over the age of 65 and comprise approximately 110 acres in the City. Independent, assisted, and convalescent homes are included in this category.

COMMERCIAL. Commercial land uses cover approximately 650 acres in the City. In the 1998 survey, commercial land uses were included in the retail commercial and automotive commercial land use categories. For this land use survey, commercial uses are separated into neighborhood, community, and regional commercial, and service commercial.

- Neighborhood Commercial land uses accommodate the day-to-day shopping and service needs of the residents of the City and draw upon the smallest geographical area for their customers. A typical neighborhood center will serve a trade area population ranging from 3,000 to 20,000 people. These types of uses can be found in smaller stand-alone buildings and in small strip centers along minor thoroughfares. Examples of neighborhood commercial land uses include drug stores, convenience stores, and personal service stores such as barbershops, dry cleaners, and video rental stores. Neighborhood commercial land uses are found at various locations throughout the City, but most particularly along Auburn Road.

- Community Commercial land uses are intended to accommodate the general shopping needs of the residents of the City. Community commercial uses draw upon a smaller geographical area than regional commercial uses, but a larger geographical area than a neighborhood commercial use. A typical community commercial retail center will serve a trade area population ranging from 20,000 to 100,000 people. These types of land uses can be found in larger stand-alone buildings and in larger strip centers along both minor and major thoroughfares. Examples of community commercial land uses include grocery stores, restaurants, hardware stores, and other general retail uses. Community commercial land uses are found along Rochester and Walton Roads, and at the intersections of Walton and Livernois Roads and John R and Auburn Roads.

- Regional Commercial land uses are intended to meet the shopping needs of both the residents of Rochester Hills and surrounding communities. A regional commercial center typically serves a trade area population of 100,000 or more people. Such retail uses are usually much larger in scale than other types of commercial uses, and are dependent on customers driving from farther away than neighborhood or community commercial land uses. As a result, these types of commercial centers will typically have a large parking lot. Examples of regional commercial land uses include big-box stores in large shopping centers such as Target, mega-grocery stores such as Meijers, stand-alone big-box stores such as Home Depot, and automobile dealers. The Village of Rochester Hills is an example of a non-traditional regional commercial center. Regional commercial uses are found almost exclusively along Rochester Road, with the notable exception being the Village of Rochester Hills located at Walton and Adams Roads.

- Service Commercial land uses are generally geared towards the automobile, although some home services operations are included in this category. Examples of service commercial uses include fast-food restaurants with a drive-through, gas stations and auto repair garages, tire and muffler shops, and home improvement contractors operations with a retail component. These uses are scattered throughout the City, although service commercial uses that are highly dependent upon large volumes of automobile traffic, such as fast food restaurants, are generally located along Rochester Road.

OFFICE. The office land use category includes professional offices. These offices are usually smaller in scale, and may deal with the general public. Office uses cover approximately 230 acres, and are located primarily along Walton, Rochester, and Crooks Roads.

OFFICE RESEARCH. Office research land uses include research and development centers, or headquarter locations for firms. These types of development are usually more intensive in scale than professional office uses, and create a larger demand for parking than similarly sized industrial uses. Office research land uses cover approximately 65 acres, and are located along Hamlin Road in the western part of the City near the Auburn Hills boundary.

INDUSTRIAL. This category includes both light and heavy industrial uses. Uses such as light fabricating or assembly are considered light industrial uses. Large, truck intensive operations such as asphalt and concrete plants are considered heavy industrial uses. Industrial uses cover approximately 670 acres of land in the City.

HIGHER EDUCATION. This land use category includes colleges and universities located in the City - Rochester College and Oakland University. These higher education uses cover approximately 950 acres of land.

INSTITUTIONAL. Institutional land uses are generally land uses that provide a unique service to the community and comprise approximately 41 acres of land. The land uses in this category include the Leader Dogs for the Blind facility and Crittendon Hospital.

PUBLIC/SEMI-PUBLIC. The public/semi-public land use category includes a wide variety of public buildings and privately-owned buildings and facilities that are open to the public. City hall and other municipal facilities, privately owned golf courses, and churches are all included in this land use category. Approximately 655 acres of land are used for public/semi-public land uses.

SCHOOL. Public schools are included in this land use category. Public schools cover approximately 505 acres of land in the City.

PARK. Publicly owned parks are included in this land use category. The City of Rochester Hills' 15 city owned and operated parks, as well as other trail facilities cover a total area of approximately 950 acres.

OPEN SPACE. This land use category includes protected open space that has been preserved in conjunction with development. Often this land is unbuildable due to natural features such as wetlands or woodlands, and is set aside as part of a residential development. Detention areas on separate parcels are also included in this land use category.

Land designated "open space" is generally commonly owned by the residents of the subdivision or condominium, or by the owner of the commercial or industrial development, and is not public land. While some open space is permanently protected by conservation easements or other legal protections, not all areas designated as open space on the existing land use map are guaranteed to remain open in perpetuity. Preserved open space covers approximately 1,230 acres of land.

UTILITY. Approximately 116 acres of land in Rochester Hills is owned or controlled by public utilities.

RIGHT-OF-WAY. Approximately 2,830 acres of land are located in public rights-of-way.

VACANT. Approximately 1,945 acres of vacant land are remaining in the City, of which 442 are former landfill sites. Most of the remaining vacant parcels are scattered throughout the City, with few large vacant parcels of land remaining. Therefore, future development in the City will likely be found in the form of infill development.

These existing land uses have evolved over the last few decades to create a framework for future development.

Existing Land Use Framework

A community's land use framework is typically described in terms of corridors, districts, and neighborhoods. Corridors are defined by their role in providing transportation and creating an image of the City. Neighborhoods are mixed uses and include single family, multiple family, public facilities (schools, parks, etc.), and retail uses. Districts are similar in size to a neighborhood (less than 1 square mile), but are dedicated to a single use. The existing land use framework for Rochester Hills can be generally described as corridors and districts.

Corridors, as noted above, are primarily defined by their role in providing transportation. These corridors also contribute to land use patterns and the overall image of the City. The M-59 and Rochester Road corridor (south of the City of Rochester) form the most dominant corridors in the City. The M-59 corridor has two distinct areas, the east and west end. The eastern end of the corridor, comprised of less intense land uses than the west end, is primarily residential and office in nature, while the west end has historically developed with more intense land uses such as commercial and industrial. The Rochester Road corridor is the primary north – south roadway in the community. The corridor is commercial in nature, but also has some office, residential, and industrial land uses.

Districts are areas that are similar in size to neighborhoods but are dedicated to a single use. The Starr-bait industrial park on Crooks Road is a district. There are a number of districts in the City including commercial districts and multiple family districts.

Historically, mixed-use neighborhoods are considered to be a more sustainable form of development than single use districts. As the City of Rochester Hills continues to mature and experience more redevelopment and infill, incorporating other uses into single use districts should be explored.

Existing Land Use Trends

Table 3.2 shows the percentage of total land area of the City used for general land use categories in 1973, 1980, 1991, 1998, and 2004. Perhaps the single most important fact highlighted by the table is that Rochester Hills has almost exhausted its supply of developable vacant land. The effect of this is that Rochester Hills is no longer a growing community, but rather is a mature, established community. This will have significant impacts for the community in terms of funding public infrastructure projects and service delivery in the future. In addition, maintenance of existing development, or in some cases, redevelopment of existing development will take precedence over greenfield development.

Table 3.2
Generalized Land Use Trends: 1973-2004
City of Rochester Hills

	1973	1980	1991	1998	2004
Residential	18.8%	26.8%	37.8%	46.7%	48.5%
Commercial	1.1%	1.8%	2.9%	3.9%	4.5%
Industrial	0.9%	1.2%	3.4%	3.6%	3.2%
Public/Semi-Public	3.4%	8.3%	13.3%	14.6%	16.6%
Special Purpose	5.5%	4.7%	5.2%	5.2%	4.5%
Right-of-Way	8.5%	11.1%	12.4%	12.9%	13.4%
Vacant	59.6%	44.9%	24.0%	13.2%	9.2%

Source: City of Rochester Hills & McKenna Associates
1999 Master Land Use Plan

Residential Land Uses
Residential land uses have experienced a steady increase in the percentage of total land use for the City. Residential development in the City has generally proceeded northward. The City's oldest housing is located in the southern portion of the City south of Auburn Road and west of Crooks Road, and in the Old Town area south of Hamlin Road between John R. and Dequindre Roads. The City's newest housing is located in the northwest corner of the City, and north of Hamlin Road between Rochester and John R. Roads.

Attached single-family developments and multiple family apartment land uses are located in the southern two-thirds of the City along major roads. Most multiple-family housing in Rochester Hills is located in large apartment complexes as opposed to smaller, independent buildings or converted single-family residences.

Two manufactured housing communities are located in the City. One is located on the north side of Auburn Road between Crooks and Adams, and the other is located on the north side of Avon road between John R. and Dequindre.

Commercial Land Uses
Commercial land uses represent 4.5% of the total land area of the City, and range from neighborhood shopping centers that serve a small population to regional shopping areas that draw customers from surrounding communities as well as Rochester Hills. The primary commercial corridor in the community is Rochester Road.

Most of the national chain stores are located in the regional shopping centers that are located in along Rochester Road. However some national retailers are also located along western end of Walton Road.

Commercial land use as a percentage of the overall community has remained relatively stable since the 1991 land use survey. While the overall land area devoted to commercial use has remained relatively stable, there has been continued infill commercial development since 1991. A good example of such development is the Village of Rochester Hills. However, most commercial centers do not currently have excessive vacancy rates, and the City is increasingly pressured to develop additional commercial areas. This indicates that Rochester Hills may want to consider allocating additional commercial land area or intensifying existing commercial developments in the City.

Industrial Land Uses
Industrial land uses account for 3.2% of the total land area of the city, a percentage that has remained fairly constant since the 1991 survey. By and large, industrial land uses in Rochester Hills are characterized by light industrial land uses in the southwestern quadrant of the City. Most of these industrial uses are located in industrial parks or along the railroad right-of-way.

Much of the land currently used for industrial purposes is located in the SmartZone®, which may contribute to the stability and evolution of these areas to more research and technology driven uses.

Public/Semi-Public Land Uses
The general public/Semi-Public land use category includes municipal buildings and land, parks, schools, churches, and golf courses, among other uses. Public/semi-public land uses have remained fairly constant as a percentage of overall land use since the 1991 land use survey.

Special Purpose
The special purpose land use category includes colleges and institutional uses such as Crittendon Hospital, the Humane Society, and Leader Dogs for the Blind. Special purpose land uses account for approximately 4.5% of the total land area of the City. This figure has remained constant since the first land use survey was completed in 1973.

Vacant Land
Vacant land has dwindled to just 9.2% of the total land area of the City, which is a bit less than two-thirds of the amount of vacant land that was available when the 1998 survey was completed. Further, few large vacant parcels remain (excluding the 442 acres of landfill), with remaining vacant parcels, having an average area of 1.38 acres. Therefore, new development in the City will be smaller scale infill development and redevelopment of existing development. It will be important to develop flexible tools to appropriately guide infill development and redevelopment to ensure that it is compatible with surrounding land uses.

Redevelopment Opportunities
Part of an existing land use analysis is to determine where redevelopment opportunities exist in the community because land is currently underutilized. In the case of Rochester Hills, the majority of single-family housing stock is relatively new and of high quality, so single-family residential redevelopment is unlikely to occur in most locations.

- *Industrial Redevelopment.* The potential exists for redevelopment of current industrial areas. Many industrial uses were established early in Rochester Hills' development cycle. These uses were established due to the availability of relatively cheap land and access to transportation. However, as Rochester Hills has become an established community, land prices have increased. This, coupled with changing economy and business paradigms, makes it likely that older industrial buildings that are no longer compatible with current needs will be redeveloped.

  The most likely location for such redevelopment is in the SmartZone® area, where the potential exists for new office research businesses to locate in the City. These types of businesses generally employ a higher number of employees in multi-story buildings, requiring greater on-site parking, amenities, and a higher level of design than may have been expected for older light industrial buildings.

- *Commercial Redevelopment.* It is unlikely that wholesale commercial redevelopment will occur, however, the opportunity exists for infill development on existing commercial sites. Such infill development may come in the form of additional residential, commercial, or mixed-use buildings located in the oversized, perennially empty parking lots of large commercial centers. Commercial redevelopment is also a possibility along Auburn Road west of Crooks Road and in the Old Towne area. Specific design standards should be adopted for these areas to guide future redevelopment.

Housing Analysis

This section of the Master Plan analyzes the City's housing stock and development trends, and provides projections for new housing construction. The purpose of this chapter is to provide an understanding of the local housing market and to project future housing demand to guide the formulation of the Future Land Use Plan.

Chapter 2, Demographic Analysis, describes the basic characteristics of the City's housing stock. This chapter analyzes more detailed housing data, relying extensively on City Assessment records, as well as information from the Census Bureau, SEMCOG, and elsewhere. Specifically, this chapter analyzes the following housing characteristics:

- Age of housing
- Housing values
- House size
- New housing construction

Based on the analysis of housing characteristics, this chapter projects new housing construction under various scenarios.

Age of Housing

Chapter 2, Demographic Analysis, showed that the median age of the City's housing stock (by year constructed), 1981, was newer than the median age of the housing stock in all the surrounding communities, except Oakland and Shelby Townships.

The age of housing is also correlated to other housing characteristics, as is described in subsequent sections of this chapter.

Table 3.3 shows the age of the City's housing stock in 2004, based on City assessment records. The table reflects only those single-family housing units for which assessment records describe the total floor area. Most tax-exempt property and all vacant property are excluded from the analysis.

The age categories used are more functional than the decade of construction reported by the Census Bureau. Very old housing is that which is 50 years or older. While 50 years is not a magic number, it is often used as a preliminary measure of potential historical significance. Old housing, that which is 30 years or older, often requires more frequent repairs than new housing. Old housing tends to be significantly smaller than new housing raising concerns of marketability, expansion, and reuse as the market continues to provide increasing house sizes. Newer housing is less than 30 years old. Newer housing has been divided into ten-year increments to provide a better illustration of housing construction over time on the Age of Housing Map on page 3.14.

The data show that the single largest category of newer housing in the City is 10 to 19 years old. Significantly, 21 percent of the City's housing is less than 10 years old, indicating that the community continues to grow.

The age of housing units is also correlated to other housing characteristics, as is described in subsequent sections of this chapter.

Table 3.3
Age of Housing Stock
City of Rochester Hills, 2004

Age Category	Number of Units	Percent of Units
More than 50 years old	2,245	3.9
30 to 49 years old	7,606	13.1
20 to 29 years old	14,532	25.1
10 to 19 years old	21,336	36.9
Less than 10 years old	12,170	21.0
TOTAL	57,889	100.0

Note: The number of housing units and percent of housing units reflect only those housing units for which a year of construction is identified in the assessment records.
Source: McKenna Associates, Inc., 2004. Data provided by City of Rochester Hills Assessing Department.

Housing Values

Homeowners value governmental efforts to maintain property values throughout the community because the homeowners' investment in housing is usually their largest single investment. Local governments value homeowner efforts to maintain property values because local government revenues are generated primarily through property taxes.

Based on City assessing records, the average housing value in the City of Rochester Hills in 2004 was $279,226. The average housing value per square foot of total building area was $126.65 in 2004. Housing values tend to vary with age and with housing size. These variables are categorized in Table 3.4.

Table 3.4
Average Housing Value per Square Foot
Rochester Hills, 2004

Age Category	Average Value per Square Foot
More than 50 years old	$124.75
30 to 49 years old	$124.91
20 to 29 years old	$119.02
10 to 19 years old	$132.27
Less than 10 years old	$124.75
All Houses	$126.65

Source: McKenna Associates, Inc., 2004. Data provided by City of Rochester Hills Assessing Department.

The data in Table 3.4 show that the lowest value housing in the City is that which is 20 to 29 years old, at $119.02 per sq. ft. Housing that is both older and newer tends to be higher in value. The highest value housing in the City is that which is 10 to 19 years old, at $132.27 per sq. ft. Part of the increase in value in newer housing is that newer housing tends to be larger than older housing. Thus, housing that is currently 10 to 19 years old should carry much of its value into older age simply because the houses are larger. Refer to the map on page 3.15 for a graphic representation of housing values per square foot.

It is not clear, however, if housing that is currently 20 to 29 years old will increase in value as it ages. Significant increases in housing value for housing that is 20 to 29 years old will require re-investment in the housing structure, including upgrades electrical and mechanical systems and additions and expansions that increase overall house size.

The City should facilitate re-investment in older housing because 25.1 percent of all city housing is in this 20 to 29 year old range with the lowest average housing value.

Housing Size

The average single-family house size in Rochester Hills in 2004 was 2,229 sq. ft. Average house sizes are depicted on the map on page 3.16. As stated previously, new housing tends to be larger than older housing. The average house size by age of housing is presented in Table 3.5. If existing trends of housing size increases continue, the average new house size in the city will be 3,200 sq. ft. in 5 years, and 3,515 in 15 years.

Table 3.5
Average House Size by Age of Housing, Rochester Hills, 2004

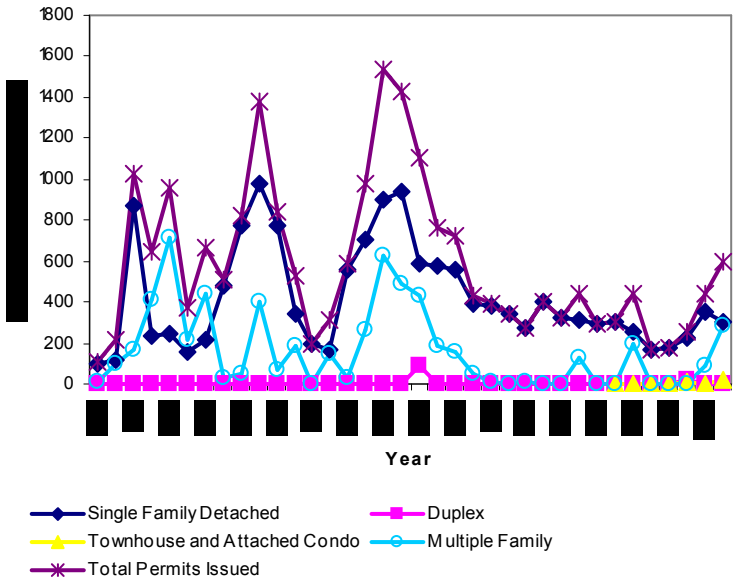
Age Category	Average House Size
More than 50 years old	1,377
30 to 49 years old	1,867
20 to 29 years old	2,321
10 to 19 years old	2,432
Less than 10 years old	2,952
All Houses	2,229

Source: McKenna Associates, Inc., 2004. Data provided by City of Rochester Hills Assessing Department.

Housing size is an important housing characteristic for two reasons. First, as the market demands larger housing sizes, the City's existing housing stock may become less desirable. It is likely that the City's regional location and schools, both contributors to housing value, will be checked by relatively smaller house sizes, typically a detractor from housing value.

Secondly, housing value tends to rise with increasing house size. For example, putting a 40 sq. ft. addition on an average 2000 sq. ft. house in Rochester Hills might increase the market value from $250,000 to $255,900. As the City's tax revenues are based on property value, larger housing implies larger tax revenues.

Figure 3.1
Number of Housing Units Authorized by Building Type City of Rochester Hills, 1969 to 2004

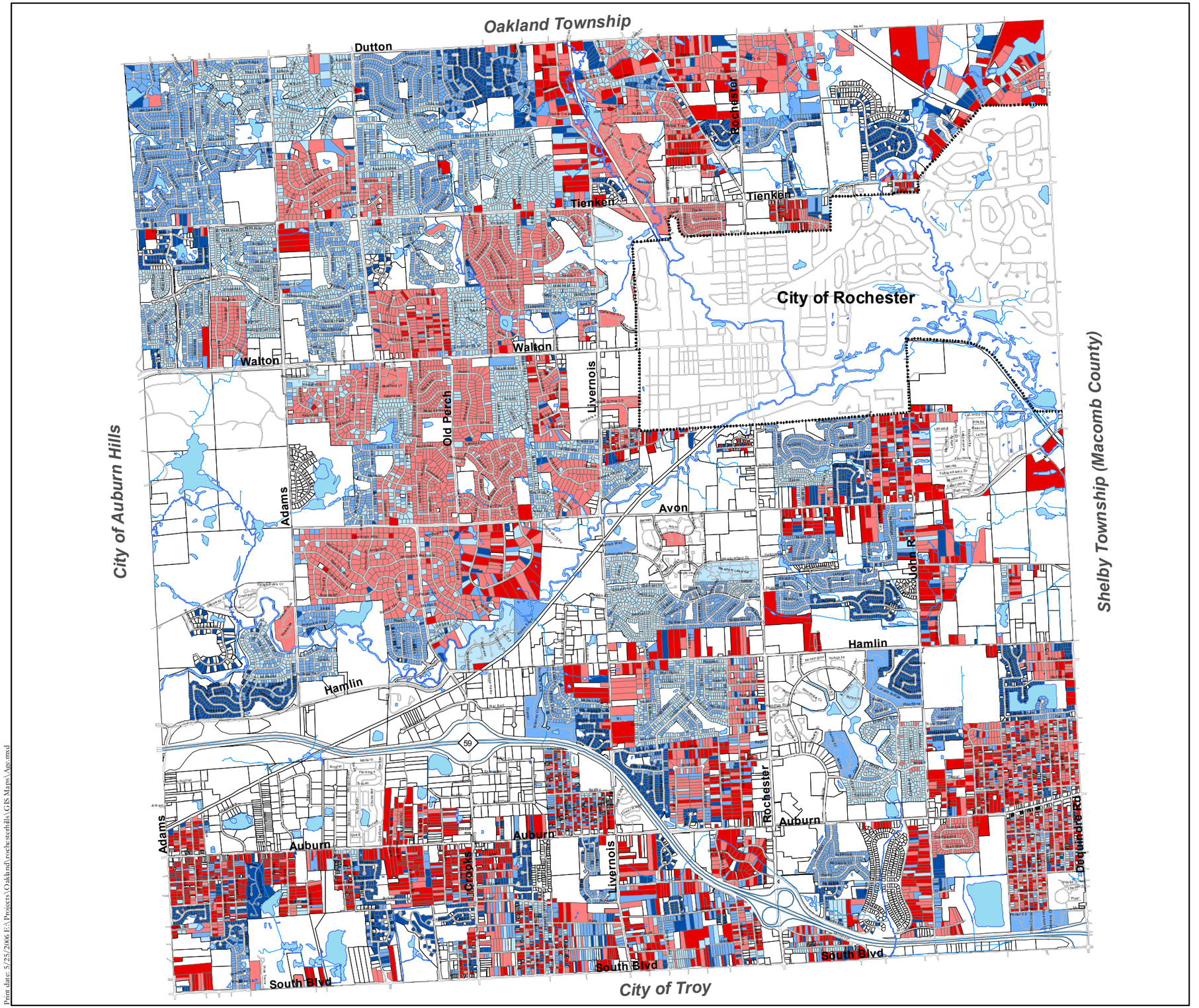


Further, as the cost of City services are by and large determined by the total number of households or the total population, increasing the size of existing housing will increase revenues but will not necessarily raise the costs of providing City services. However, ability to increase the size of existing housing may be constrained by regulatory constructs such as zoning setbacks.

SINGLE FAMILY HOUSING: AGE

Draft

City of Rochester Hills, Michigan



- Non-Residential, Apartments, Mobile Home Parks, Tax-Exempt, or Vacant
- Very Old (more than 50 years old)
- Old (30 to 49 years old)
- 20 to 29 years old
- 10 to 19 years old
- Less than 10 years old

Base Map Source: City of Rochester Hills GIS, 2004
Data Source: City of Rochester Hills Assessing Office, 2004

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McKenna Associates Incorporated

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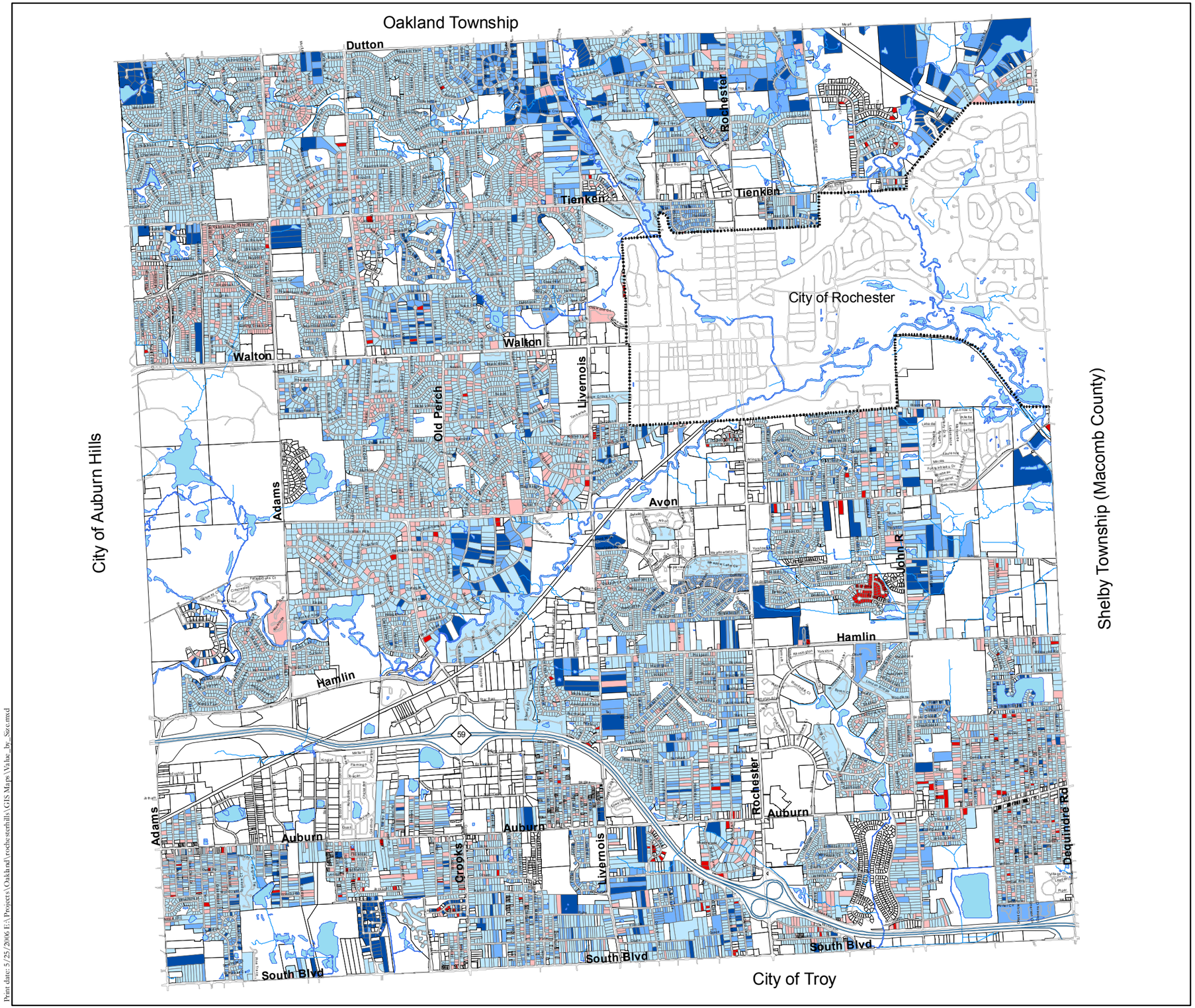

SINGLE FAMILY HOUSING: VALUE BY SIZE

Draft

City of Rochester Hills, Michigan

House Size (Sq. Ft.)

- Non-Residential, Apartments, Mobile Home Parks, Tax-Exempt, or Vacant
- < $79.4 /sq. ft.
- < $103.0 /sq. ft.
- < $150.3 /sq. ft.
- < $173.9 /sq. ft.
- > $173.9 /sq. ft.

Base Map Source: City of Rochester Hills GIS, 2004
Data Source: City of Rochester Hills Assessing Office, 2004

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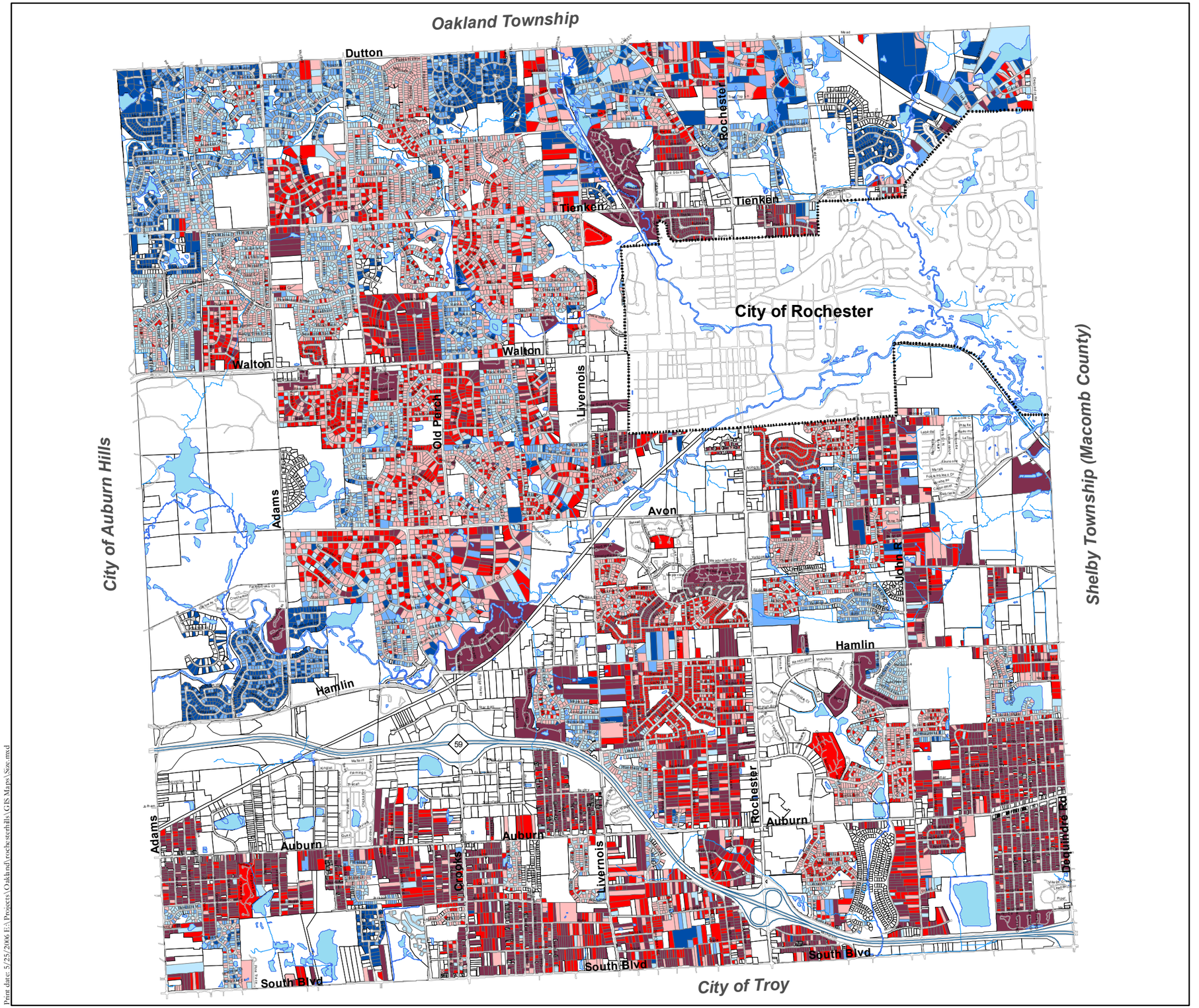
SINGLE FAMILY HOUSING: SIZE

Draft

City of Rochester Hills, Michigan



House Size (Sq. Ft.)

- Non-Residential, Apartments, Mobile Home Parks, Tax-Exempt, or Vacant
- < 1,500
- 1,500 - 2,000
- 2,001 - 2,500
- 2,501 - 3,000
- 3,001 - 3,500
- > 3,500

Base Map Source: City of Rochester Hills GIS, 2004
Data Source: City of Rochester Hills Assessing Office, 2004

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New Housing Construction

The number of housing units authorized for construction in Rochester Hills from 1969 through 2004 is presented graphically in Figure 3.1. The data reflect permits issued for new housing construction, but do not account for units demolished. Over the past 35 years, single-family detached housing has accounted for 71.4 percent of all units authorized and multiple family units accounted for 28.0 percent. The City authorized more than 1,000 dwelling units per year in 1971, 1978, and 1985-1987.

More important is the trend in permits issued over the past ten years, which is used to project the number of housing units expected over the next ten years. This data is presented in Table 3.6, below. Over the past 10 years, the City has, on average, approved 345 new housing units each year. The number of permits issued has exceeded the average for both of the past two years. If present trends continue, over the next ten years, the number of new housing units authorized by the City would increase from 397 in 2005, to 482 in 2014.

Table 3.6
Number of Housing Units Authorized by Building Permit City of Rochester Hills, 1995 through 2004.

Year	Single Family	Duplex	TAC	Multiple Family	Total Permits Issued
1995	324	0		0	324
1996	317	0		126	443
1997	295	0		0	295
1998	306	0	0	0	306
1999	253	0	0	192	445
2000	167	0	4	0	171
2001	173	0	4	0	177
2002	227	16	10	0	253
2003	350	2	0	86	438
2004	302	0	16	279	598
1995-2004	2,714	18	34	683	3,449
Percent of 10-Year Total	78.7	0.5	1.0	19.8	100.0

Source: McKenna Associates, Inc., with building permit data provided by SEMCOG.

Continued Multiple Family Development

Analysis of the permits issued over the past ten years provides two insights. First, multiple family housing units are typically constructed in large development projects. Over the past ten years, there were six years in which no new multiple-family units were authorized. However, large projects in the other four years were sufficient to keep apartments at about 19.8 percent of all housing units constructed over the ten-year period. Secondly, the ten year trend is, on average, increasing. Thus, over the next ten years the City may see an increase in the number of new apartment developments.

Increasing Development of Single-Family Attached Condos

The second insight is that the City of Rochester Hills has not yet experienced the demand for alternative housing types that has generally been found throughout southeast Michigan. Construction of townhouses and single-family attached condos has increased so rapidly, that SEMCOG adopted a new classification – TAC (Townhouse and attached condominiums), for reporting building permits in 1998. Since 1998, these single-family attached condos have constituted 16.9 percent of all building permits issued in Southeast Michigan, but only 1.4 percent of the permits issued in the City of Rochester Hills. If present trends continue, we project that single-family attached condos will increase in demand, expanding from 32.3 percent of all permits issued in 2005 to 41.5 percent in 2015.

Projected Housing Construction

Based on the number of building permits issued from 1995 through 2004, we project the total number of new housing units to be constructed in Rochester Hills. The projection assumes that the number of single-family attached condos will increase, approaching the regional level of construction by 2015. The projection further assumes that the increase in single-family attached housing units will replace an equal number of single-family detached housing units and multiple-family housing units that otherwise would have been projected.

The projected number of new housing units for the next ten years reflects market demand based on past housing development patterns. The projection does not identify specific locations for new residential development, nor does it imply that there is sufficient developable, vacant land available. The projection does indicate that market demand for new housing can be expected over the next ten years.

Table 3.7
Projected Housing Construction by Type of Housing, Rochester Hills, 2005 through 2014

Year	Single Family	TAC	Multiple Family	Total New Units Authorized
2005	312	4	79	395
2006	306	21	77	404
2007	299	39	75	413
2008	292	57	73	422
2009	283	76	71	431
2010	274	96	69	440
2011	265	117	67	449
2012	255	139	64	457
2013	244	161	61	466
2014	232	184	58	475
2005-2014	2,762	894	695	4,352
Percent of 10-Year Projection	63.5%	20.5%	16.0%	100.0%

Source: McKenna Associates, Inc., 2004

Conclusion

Based on past trends it appears that there will be continued strong market demand for new housing in the City of Rochester Hills. What is not clear is whether there is sufficient vacant, developable land for the City to accommodate past levels of growth with the same land use pattern. The City could accommodate the same level of household growth over the next ten years, using less land area, by promoting the development of townhouses and attached condos at a rate similar to which this kind of housing is being developed throughout the SEMCOG region.

The City's older housing is of less value than newer housing. The lowest value housing in the City is aged 20 to 29 years old, with older housing of only slightly higher value. To promote property values the City should facilitate and promote reinvestment in the older housing stock.

One large part of the housing value problem with older housing is that it is smaller in size than newer housing. The City should assess how zoning requirements affects the ability to expand older housing. Additions to older housing not only make such units competitive on a size basis with newer housing, but also increase the taxable value of developed property.

Neighborhood Areas Analysis

Neighborhoods are the building blocks for every community. The makeup, character, and health of a community's neighborhood areas in turn establish the makeup, character, and health of the City as a whole. Neighborhoods can be residential, commercial, industrial, or mixed-use in character. In turn, residential neighborhoods each contain characteristics that define them, such as small, urban lots or large, suburban or rural lots. Commercial neighborhoods can be characterized by small corner stores, or by linear shopping corridors containing large big-box stores that extend along 5 lane major roads. Rochester Hills' residential neighborhoods range from long-established areas with gridiron streets to new subdivisions with curvilinear streets nestled into woodlands and pockets of open space.

Major roads, natural features, and/or the perceptions of the residents of the community often define the boundaries of a particular neighborhood. For the purposes of this analysis, we have defined neighborhood areas (which may contain more than one subdivision) for Rochester Hills based on census tract boundaries (which generally follow major roads and major natural features such as rivers). We then summarized key physical and demographic characteristics of each neighborhood area, and identified areas within the neighborhoods that are likely to experience change in the next 5-10 years.

Neighborhood Characteristics

Fixed features such as location, housing, transportation, schools, places of worship, and employment define neighborhoods. Other forces that impact and define neighborhoods include infrastructure such as sewer and water, and zoning designations. Most of the fixed features of a neighborhood are generally stable and change slowly over time, which contribute to the stability of a neighborhood.

Table 3.8 (the Neighborhood Characteristics Matrix) and the map on page 3.22 list key physical and demographic features of each neighborhood area in the City. The features are as follows:

- Neighborhood schools are an important component in establishing and maintaining a neighborhood identity. It is difficult for an area to truly function as a neighborhood without a school. Elementary, Middle, High, and private schools are identified,.

- Parks provide neighborhoods with recreation opportunities, places for neighbors to meet, and aesthetic value. Neighborhood (smaller than 20 acres) and Community (larger than 20 acres) public parks are identified.

- While not the only element of a neighborhood, shopping opportunities integrated with and convenient to neighborhoods contribute to the quality of life for residents of the City. Having a convenience store or stores serving other daily shopping needs within walking distance or a short car ride from home is a convenience for residents and reduces overall traffic congestion in the City. Neighborhood areas with local shopping opportunities are identified.

- The quality and condition of the housing stock in a neighborhood affect the vitality and quality of the neighborhood as a whole. The age of the housing stock in a neighborhood does not necessarily determine the quality and condition of the houses; however, the age of

the housing does indicate where greater attention to maintenance and reinvestment in homes is required to keep the housing stock in good condition. The matrix identifies neighborhoods where at least 50% of the houses were built more than 35 years ago (before 1970) or where at least 33.3% of the houses were built more than 45 years ago (before 1960).

- Planning research indicates that population succession is a leading cause of physical change in a neighborhood. Such change can be positive if new residents improve and reinvest in older houses, however, it can also be negative if newer residents possess fewer economic resources to maintain their homes than did previous owners or if older residents neglect to maintain their homes.

The matrix identifies neighborhoods where population succession is occurring or is likely to occur based on a combination of three factors: a higher proportion of older residents, declining real incomes, and a potential for declining real housing values. Those factors are analyzed as follows:

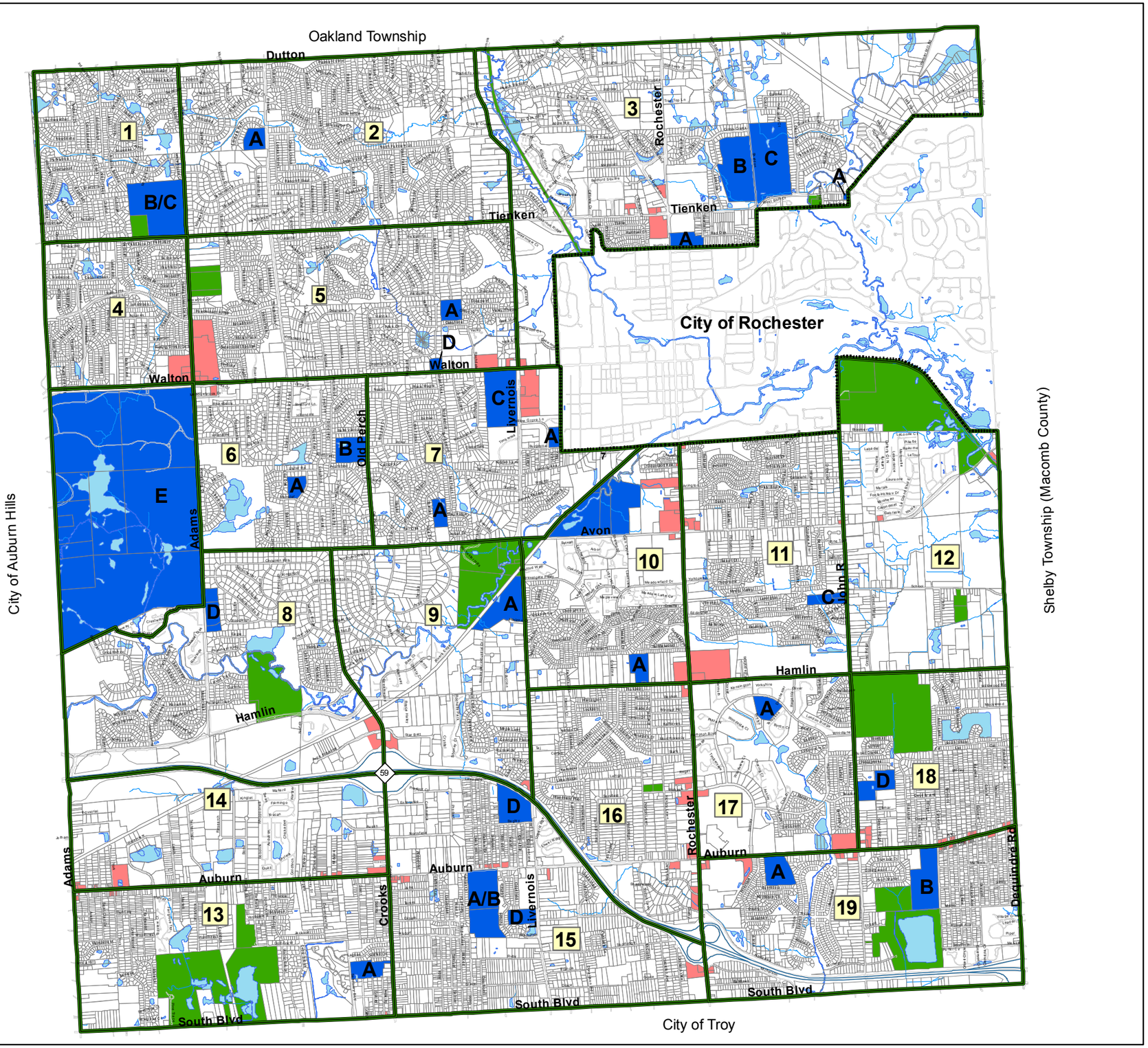
- A neighborhood is identified in the matrix as a having the potential to experience population succession when household incomes and housing values declined from 1990-2000 after being adjusted for inflation. These factors may indicate a declining ability among existing residents to maintain their homes, or that the existing housing is becoming more affordable for younger potential residents.
- A neighborhood is identified in the matrix if it contains a higher proportion of residents in the 55-64 and 65 and older age groups as well as a lower proportion of residents aged 19 or less than the City as a whole. Older residents are more likely to leave existing homes, and also spend less on home maintenance than younger residents. American Housing Survey data indicates that homeowners over 75 years of age spend approximately $270 less per year on routine home maintenance and $1,100 less on all home improvement. As a result, homeowners over the age of 75 experience 3% less appreciation on their homes than younger residents, which increases the relative affordability of a neighborhood for people looking to buy a home in the City.

As Rochester Hills transitions from a developing community into a mature community, it is important that the City maintain its image as a desirable place to live and continue to protect and offer amenities to residents that will help maintain existing neighborhoods in their current condition or improve older neighborhoods.

NEIGHBORHOODS: PHYSICAL CHARACTERISTICS

Draft

City of Rochester Hills, Michigan



Land Use Categories

- Commercial
- Park
- 1 Neighborhood Boundary
- School:
  - A. Elementary School
  - B. Middle School
  - C. High School
  - D. Private School
  - E. University/College

Base Map Source: City of Rochester Hills GIS, 2004
Data Source: McKenna Associates, Inc., 2004

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Table 3.8
Neighborhood Characteristics Matrix
City of Rochester Hills, 2004

NEIGHBORHOOD[1]	SCHOOLS	PARKS	SHOPPING	AGE OF HOUSING STOCK	POPULATION SUCCESSION
	E: Elementary M: Middle H: High School P: Private	N: Neighborhood C: Community U: Undeveloped	Commercial conveniently located within neighborhood boundaries	50% of housing older than 35 years and/or 33.3% older than 45 years	A: Age D: Potential for declining real income and property values
1	M,H	N			
2	E				
3	E,M, H	N	•		A, D
4			•		A, D
5	E,P	U	•		A, D
6	E, M				A, D
7	E, H, A				A, D
8	P	C			A
9	E	C			A
10	E		•		D
11	H		•		
12		N, C	•		
13	E	C		•	
14			•		A, D
15	E,M, P		•	•	
16		N	•		
17	E		•		
18	P	C	•	•	
19	E, M	C	•	•	

[1] *Refer to the Neighborhood Characteristics Map on page 3.22 for neighborhood locations*

• *Characteristic Located within Neighborhood*

Neighborhood Change

While neighborhoods are generally stable, the old axiom that the only constant is change does apply. Neighborhoods are constantly evolving, and specific events or forces can significantly alter the characteristics of a neighborhood. The forces that drive neighborhood change are many and varied, and include economic, lifestage, or social changes.

The first identified type of neighborhood change occurs as a result of demographic or social changes in the population of a neighborhood. These changes are due to lifestage changes such as getting married, having children, getting a raise, emptying the nest, or retirement, and do not alter the overall housing density of the area. For example, an established neighborhood with larger homes and an aging population can be expected to experience demographic change as older residents move out and are replaced by younger residents. Or, an older neighborhood with lower housing values in a desirable area such as Rochester Hills may experience demolition of existing houses and the construction of larger, more modern homes built to suit today's tastes.

The second identified type of neighborhood change occurs when large parcels of land are underutilized and can be redeveloped or subdivided for new development. Increasing land values, the extension of public infrastructure, or rezonings can make it economically feasible or desirable to develop a large parcel of land. In this instance, these economic forces drive neighborhood change as existing residents sell all or a portion of their land for development or existing commercial developments are enlarged, which results in an increase in the overall intensity of a neighborhood. This sort of activity can have significant impacts upon existing residents in the area as large parcels of open land and often highly-valued rural character are changed.

The Neighborhood Change Map on page 3.25 illustrates neighborhood areas that may experience change in the next 5-10 years. Two types of potential neighborhood change have been identified and a summary of each follows.

Neighborhood Succession and/or Reinvestment

The following neighborhood areas either are or can expect to experience residential reinvestment. These areas were identified based on relative property values as well as the mixture of dates when homes were constructed in the neighborhood. Such reinvestment may improve existing houses, or may involve demolishing existing houses and replacing them with a new house.

Neighborhood 11 – The northeastern area of this neighborhood, between John R. and Willard Avenue may experience reinvestment.

Neighborhood 15 – The residential streets on the north side of Auburn Road between the industrial park and the apartment complex.

Neighborhood 16 – The eastern half of this neighborhood, east of Juengel and south of Lehigh. It should be noted that Fair Acres Court is an example of the rear portion of deep lots being assembled for development.

Neighborhoods 18 & 19 – The existing neighborhoods to the north and south of Olde Towne and east of Culbertson.

POTENTIAL RESIDENTIAL CHANGE AREAS

Draft

City of Rochester Hills, Michigan

Oakland Township

City of Auburn Hills

City of Rochester

City of Troy

Shelby Township (Macomb County)

Dutton
Tienken
Rochester
Walton
Livernois
Old Perch
Adams
Avon
John R
Hamlin
Auburn
Crooks
South Blvd
Dequindre Rd
59

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

Land Use Categories

- Single Family Residential
- Multiple Family Residential
- Commercial
- Office
- Vacant
- Industrial
- Park
- Public/Semi Public/Institutional/ Higher Education/Utility
- Open Space
- Surface Water

- Potential Change Area
- Potential Reinvestment Areas

- 1 Neighborhood Boundary

Base Map Source: City of Rochester Hills GIS, 2004
Data Source: McKenna Associates, Inc., 2004

0 1,700 3,400 Feet

McKenna Associates Incorporated

N

5/25/2006

Print date: 5/25/2006 E:\ Projects \ Oakland \ rochesterhills \ GIS Maps \ Potential_Residential_Changes.mxd

Potential Development Change Areas
The following neighborhood areas may experience redevelopment, lot splits or requests for residential condominium or subdivision development:

- Neighborhood 2 – Properties located along Livernois Road in the easternmost portion of neighborhood 2 are large enough to permit additional development through land assembly or simple lot splits.

- Neighborhood 3 - Many larger parcels are located in the northern half of neighborhood 3. These parcels are large enough to permit simple lot splits, or land assembly could occur to permit more intense residential development. A water and sewer extension is planned in the northwest quarter of neighborhood 3 in 2005, and a water and sewer expansion is planned for the eastern half of neighborhood 3 in 2009. The extension of public utilities will likely increase development pressures in this area of the City. Any proposed development should respect the existing topography and significant natural and historic features of this neighborhood.

- Neighborhood 7 – A water and sewer extension for the easternmost portion of neighborhood 7, between the City of Rochester and the Clinton River is planned for 2005. There are a number of acreage parcels in this area that may be assembled and developed if public utilities are extended. This area is proximate to the Clinton River, so proposed development must respect floodplains and wetland areas.

- Neighborhood 8 – The Christian Hills area contains many older homes on lots that are larger than the minimum lot area required in the underlying zoning district. Two adjoining lots could be assembled and split into three new lots.

- Neighborhood 9 – Many long, narrow lots are located along Avon Circle. These lots could also be assembled and further developed. Alternately, the rear portion of the lots could be sold for development.

- Neighborhood 10 – The large lots on the north side of Hamlin Road in neighborhood 10 could experience further development.

- Neighborhood 11 – Large lots exist on the south side of Avon Road between Chippewa Trail and Thames, and could be split or redeveloped.

- Neighborhood 12 – This neighborhood is almost entirely characterized by single-family homes on larger parcels that could be assembled for development or landfill property. It is unclear what landfill property is available for development and what mitigation measures will be required, although some redevelopment is likely to occur.

- Neighborhood 13 – Both older single-family homes located on smaller lots and larger parcels that could be developed characterize this neighborhood. It is likely that this neighborhood will experience both new development on the larger parcels and redevelopment of older homes on the smaller lots.

- Neighborhoods 9,14, 15 – Portions of these neighborhoods are within the SmartZone® boundaries

and are likely to experience redevelopment. Many of the industrial developments within these boundaries will need redevelopment to stay competitive in the market place. As the industrial market changes in the City and the region, the buildings in these areas need to be redeveloped to accommodate additional office space. Additionally, many of the older residential areas within this area could experience non-residential redevelopment pressure.

- Neighborhood 15 – There are a few larger parcels located in the eastern portion of this neighborhood that could be assembled or split, however, most of the redevelopment opportunities in this area stem from the fact that the existing lots are at least twice as large as required by the underlying zoning. Therefore, the assembly of just a few existing lots could permit up to twice the number of homes to be developed on the same land area.

- Neighborhood 18 – The southwest quadrant of neighborhood 18 contains a number of lots that are at least twice as large as required by the underlying zoning, so the assembly of existing homes for redevelopment is not out of the question in this area.

- Neighborhood 19 – The larger parcels located between Bendelow and John R. Road are potential candidates for assembly.

Conclusions

There are a significant number of neighborhoods within the City that will experience change within the next 5-10 years. In order to ensure that the quality of life for the residents of Rochester Hills is maintained or improved, it is important that the City identify the characteristics within neighborhoods facing change that it wishes to preserve and characteristics it desires to create or enhance and adopt the land use policies and regulations necessary to achieve that vision.

Transportation and Circulation

The road network in Rochester Hills follows the "mile-road" system of major north-south and east-west roads located along section lines and quarter lines. The grid is interrupted in a few locations within the City due to natural features or other considerations such as railroad rights-of-way.

Major roads in the community include M-59, which runs from east to west in the southern portion of the City, and Rochester Road, which is the major north-south route through the City. Other major north-south roads include Livernois and Adams road, while other major east-west roads include Auburn, Hamlin, and Walton Roads.

The Transportation and Community Facilities map on page 3.32 illustrates the functional road classification of all roads and illustrates the existing location of non-motorized pathways in the City.

Road Jurisdiction

Public roads in Rochester Hills are under the jurisdiction of one of three agencies: the City of Rochester Hills, the Road Commission for Oakland County (RCOC), or the Michigan Department of Transportation (MDOT). MDOT has jurisdiction over M-59, Rochester Road (M-150) between M-59 and the City of Rochester, and Auburn Road. The RCOC has jurisdiction over most of the other major north-south and east-west roads in the City, with the exceptions of John R road and Hamlin Road between Adams Road and Shelby Township. The City has jurisdiction over all remaining roads within the community.

Road Classifications

Each road in the community is classified according to the type and volume of traffic that is appropriate for that road. The road classifications establish expectations for the operational characteristics of each road for the residents of the City and professionals charged with road development. Road classifications also establish the eligibility of roads for various funding programs. For example, federal funds may only be used on road improvements in urban areas on roads that are classified as collector or arterial roads on the Road Classification map.

Criteria for classifying roads relate to daily trips, area serviced, and characteristics of the road. Roads in Rochester Hills are grouped into 5 classifications: principal arterials, major arterials, minor arterials, collector streets, and local streets.

Principal Arterials serve major traffic movements and provide regional mobility. As a result, principal arterials have the highest traffic volumes ad the longest trips. There are three types of principal arterial: interstate highways, other freeways and expressways, and non-freeway principal arterials. M-59, a non-interstate freeway, is the only principal arterial in the City.

Major Arterials serve major traffic movements, but have lower traffic volumes and less restricted access than principal arterials. Rochester Road and Walton Road are examples of major arterials.

Minor Arterials interconnect with the principal and major arterial system and provide trips of moderate length with a lower level of mobility. Minor arterial roads also place more emphasis on land access than major arterial roads. Minor arterial roads in Rochester Hills include Auburn Road, John R. Road, and South Boulevard.

Collector Streets provide access and circulation within developed areas. The purpose of a collector street is to literally collect traffic from the local street system and funnel it to the arterial street system. Collector roads in Rochester Hills include Dutton Road and Barclay Circle.

Local Streets provide direct access between a parcel and collector and arterial streets. Movement of through traffic is generally discouraged on local streets. Most streets in a residential neighborhood are examples of a local street.

Non-Motorized Pathways

The City of Rochester Hills also features an extensive Non-motorized pathway system along major roads. These non-motorized pathways provide residents of the City with the opportunity to use alternate forms of transportation.

Road Improvements and Maintenance

As Rochester Hills approaches build-out, maintenance of aging roads and improvements to roads that are at or near capacity will become the primary issue. Over the past years, funding for maintenance and upgrading of roads has not kept pace with the increased wear caused by development and use. Recently a road improvement millage was placed on the ballot and was not approved by the citizens of the City. As the City and its infrastructure age additional maintenance and improvements will be inevitable, so alternative funding mechanisms may need to be explored.

The following table summarizes planned road improvements within the City.

Table 3.9
Contemplated Road Improvements
City of Rochester Hills

Road	Improvement	Status
Crooks Road	Widen to 4 lane boulevard between South Boulevard and Hamlin	Planned
Crooks/M-59 Interchange	Replace bridge to accommodate 4 lane boulevard	Planned
M-59	Widen to 3 lanes in each direction between Crooks and Dequindre Roads	Planned
Adams Road	Widen to 5 lanes and realign to meet with Adams Road north of Hamlin	Planned
Adams/M-59 Interchange	Construct new bridge for realignment of Adams	Planned
Adams/Butler Intersection	Install traffic signal and widen road for center turn lane	Planned
Auburn Road	Lengthen eastbound right turn lane at Crooks Road	Planned
John R Road	Widen to 3 lanes between South Boulevard and Auburn Road	Planned
Hamlin Road	Widen to 3 lanes between Livernois and Rochester Roads	Planned
Waterview and Leach Roads	Connect Leach to new Adams Road and connect Waterview to Leach Road	Planned
Avon Road	Westbound right turn lane improvements at Rochester Road	Planned
Avon Road	Eastbound right turn lane improvements at Livernois	Planned

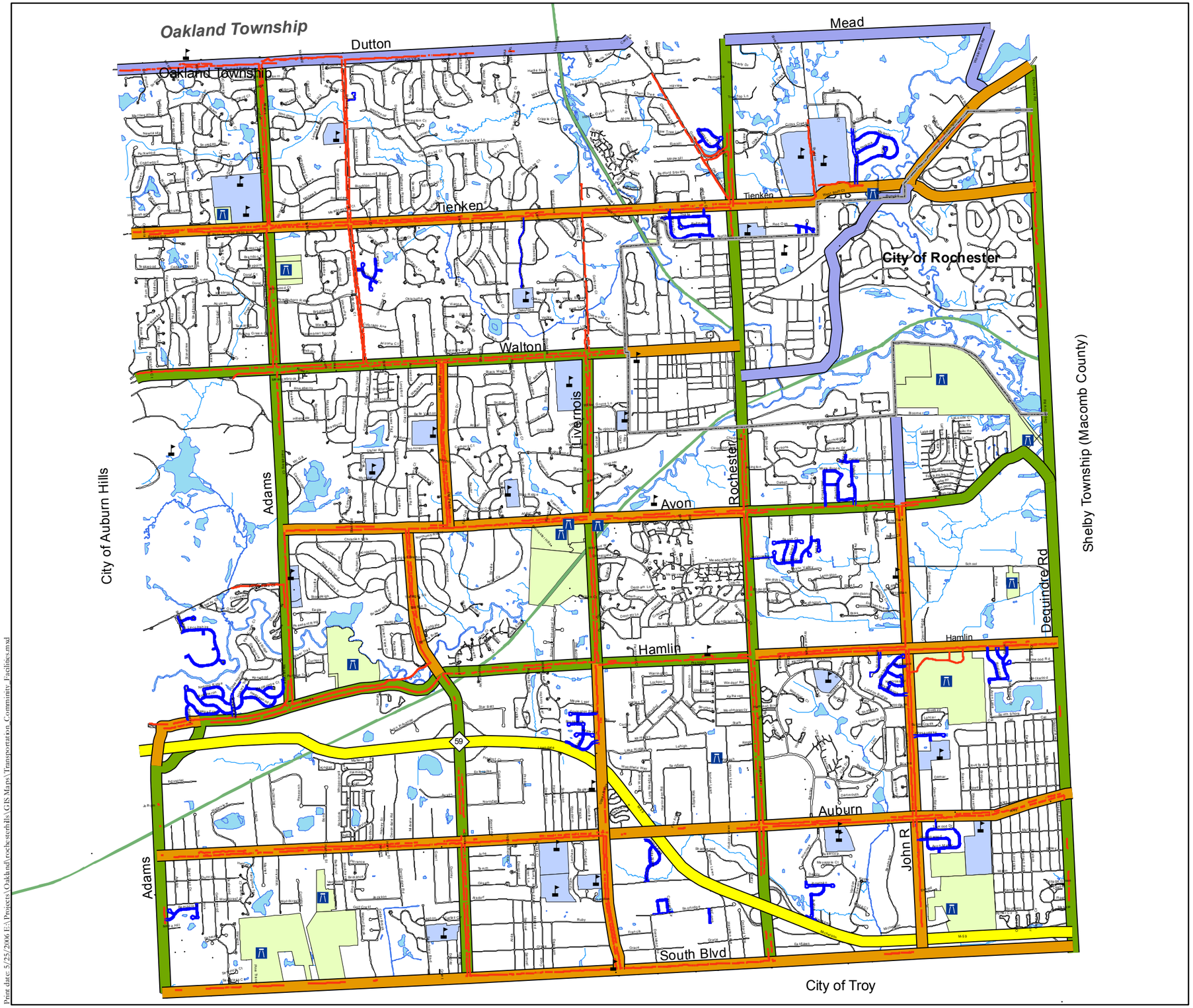
Road	Improvement	Status
	Road	
Livernois Road	Improve to 4 lane boulevard between South Boulevard and Hamlin Road	No Commitment
Livernois/M-59 Interchange	Replace bridge to accommodate 4 lane boulevard	No Commitment
Tienken Road	Replace bridge at King's Cove to accommodate 5 lanes/4-lane boulevard and install traffic signal	Planned
Tienken Road	Widen to 5 lanes between Livernois and Washington	No Commitment
Technology Road	Connect to new Adams Road	Planned
Dequindre Road	Widen to 3 lanes between South Boulevard and Auburn Road	No Commitment

Source: City of Rochester Hills Engineering Services Department

TRANSPORTATION & COMMUNITY FACILITIES

Draft

City of Rochester Hills, Michigan



Legend

- Principal Arterial
- Collector
- Major Arterial
- Minor Arterial
- City of Rochester Boundary
- Existing Pathways
- Trail
- Sidewalk
- Road
- Park
- School
- Surface Water
- Park
- School

Base Map and Data Source: City of Rochester Hills GIS, 2004

0 1,750 3,500 Feet

McKenna Associates Incorporated

5/25/2006

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Community Facilities, Infrastructure and Recreation_

Rochester Hills owns and operates a wide range of community facilities, parks, and public infrastructure.

Fire

The Rochester Hills Fire Department provides Emergency Medical Service and Fire service to residents and businesses within the City.

18 full-time Firefighter/Paramedics, 65 Paid-on-Call Firefighters, 9 administrative personnel, and 10 personnel within the Dispatch/Communications Center staff the Fire Department.

The department has 5 fire stations, one in each quadrant of the City, with the Department Headquarters in the center of the City. The department is equipped with 4 ambulances and has a mutual aid agreement with City of Auburn Hills, City of Rochester, and Oakland Township.

The department also has a Special Operations Response Team, which is a combined team with the City of Auburn Hills and the City of Rochester. This team is trained in Trench Rescue, Confined Space, Building Collapse, Hazardous Materials, and Water Rescue.

Police

The City of Rochester Hills contracts with the Oakland County Sheriff's to provide police services. The Sheriff's Department has a substation located on Barclay Circle.

Sewer and Water

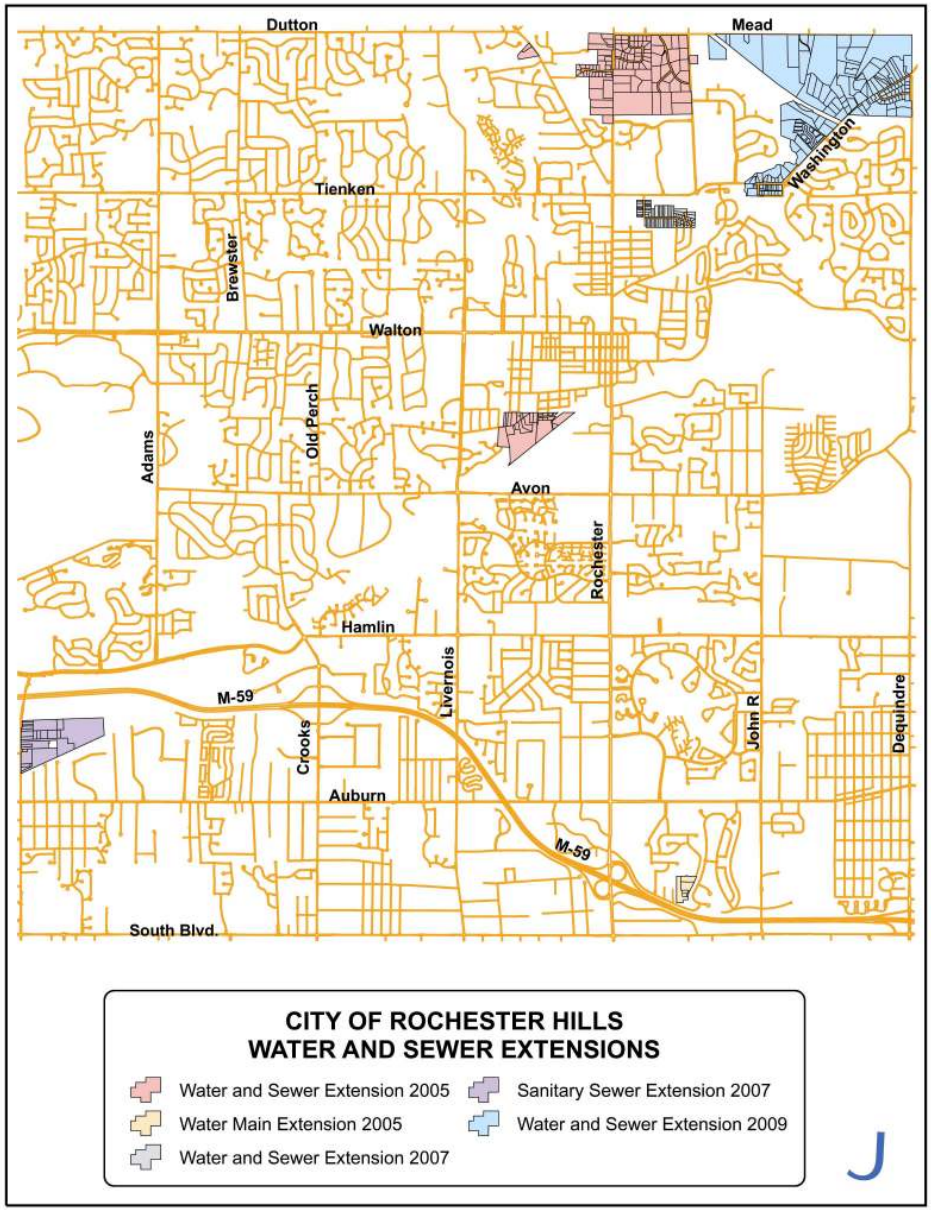
Public sewer and water currently serve most of the City. Sewer and water improvements planned over the next 5 years are summarized in the map on the following page.

Schools

Two public school districts serve Rochester Hills – Rochester Community Schools and the Avondale School District. The Rochester Community Schools is the larger of the two school districts, with an enrollment of approximately 13,880 students and covering 66 square miles, while the Avondale School District has an enrollment of approximately 3,800 students and covers 12 square miles. Most of the schools in Rochester Hills are operated by the Rochester Community Schools, as the Avondale School District operates only 3 schools within the City limits.

Standard & Poor's, which provides the State of Michigan with school evaluation services, rates both school districts serving the City above average in several key categories. Both school districts rate as leaders compared to other school districts in both the State and Oakland County in terms of average ACT scores and participation, instructional expenditures per student, and graduation rates. When compared to each other, the Rochester Community Schools rate higher than the Avondale School District in most categories.

Neither school district has immediate plans to construct new facilities or to close existing facilities. The Avondale School District is currently in the process of renovating Meadows and Deerfield elementary schools.



Source: City of Rochester Hills Engineering Services Department

Parks

The City operates 15 public parks and nature areas with a total area of approximately 900 acres. The 12 developed City parks range in size and scale from a small, neighborhood parks to large nature preserves over 100 acres in area. Facilities and amenities provided in these parks include, but are not limited to, active recreation facilities such as baseball diamonds, play lots, soccer fields, a golf course, velodromes, tennis, volleyball and basketball courts, and passive recreation facilities such as walking paths, picnic shelters, and cross-country ski paths.

The City also owns three parcels of property that are designated as parks, but are as yet undeveloped. These undeveloped park areas have a total area of 105 acres.

In addition to the City's extensive pathway system, the City also has two segments of multi-jurisdictional trailways. A 1.2 mile long portion of the Paint Creek trail is located in Rochester Hills. The 9-mile long non-motorized trail is located in the former Penn Central Railroad right-of-way and extends from the City of Rochester Municipal Park to the southern boundary of the Village of Lake Orion, and is operated by the Paint Creek Trailways Commission, an inter-governmental agency consisting of Rochester Hills, Rochester, Oakland Township, and Orion Township. A portion of the Clinton River Trail bisects the City and will eventually connect to the West Bloomfield Trail to the west, the Macomb Orchard Trail to the east, and the Paint Creek Trail to the north.

4. Natural Features

Overview

Niswander Environmental completed a Natural Features Inventory (NFI) for the City of Rochester Hills (City) in 2004 and 2005. The NFI was completed as part of the Master Land Use Plan Update completed by McKenna Associates, Inc. The NFI identified steep slopes, floodplains, wetlands, watercourses, woodlands, and Natural Areas within the City. GIS-based maps of the City's natural features have been generated as part of this NFI (Figs. 1 – 6). This NFI was undertaken with input from the Oakland Land Conservancy, Oakland County Planning, Clinton River Watershed Council, Rochester Hills Planning Commission/City Council, and the public.

The goal of the NFI was not only to identify the City's existing natural features but also to provide a baseline data set to be used for the Master Land Use Plan Update. The NFI is designed to be a tool that can be used by City planning, engineering, and parks staff on a daily basis to evaluate projects and potential impacts to natural resources. The NFI evaluated the quality of the natural resources in order to provide guidance for the preservation, restoration, and management of the City's open space. In addition, the NFI is intended to be used for determining if and how effectively the natural resources of the City are protected by the City's existing ordinances and if changes or amendments to the ordinances would provide additional protection in the future.

Methods

Available GIS data were compiled from various sources to develop an initial base map of possible existing natural features. General natural resources information was obtained from Oakland County Planning, Oakland County Soil Survey, Clinton River Watershed Council, SE Michigan Greenways Initiative, Michigan Department of Environmental Quality Wetland Inventory, Michigan Department of Natural Resources, National Wetland Inventory, and aerial photo interpretation. In addition, City specific information was obtained from the Rochester Hills GIS database, 1991 Rochester Hills Natural Features Report for the Master Planning Process, and the Rochester Hills Parks and Recreation Master Plan 2001-2005.

A comprehensive field evaluation of all accessible natural features in the City was completed in the fall of 2004. Natural features assessment data were collected at 725 survey points and photographs were taken at 671 locations.

A preliminary NFI map was generated by integrating the field data into the GIS initial base map. Each survey and photo location was identified on the NFI map and the assessment data and digital photographs were then linked to each location. GIS coverages were then developed for each natural feature category (*i.e.*, steep slopes, floodplains, wetlands, watercourses, woodlands, and Natural Areas). Attribute data, including feature type, size, quality, restorability, and other pertinent information, were linked to each individual natural feature category.

The natural features were then analyzed for significance to the City by developing qualitative criteria for site ranking. Determining significance to the City was based on evaluation

of not only the quality of the natural resource, but also the site's need for protection, threat of destruction, and relationship to surrounding land use. Criteria for ranking were based on the natural features inventory analysis done by the MNFI for Oakland County (*2004 Oakland County Potential Conservation/Natural Areas Report*). Criteria used in the Rochester Hills NFI analysis included total size of the Natural Area, size of core area, presence of stream corridors, connectivity to other Natural Areas (including existing City open space), restorability, vegetative quality, and the number of parcels involved in protecting the Natural Area.

To analyze and classify the Natural Areas, the natural break classification, known as the Jenk's Optimization Method, was used. This Method finds groupings and patterns inherent in the data by minimizing the sum of the variance within each of the classes. A total of 48 points could be assigned to each Natural Area based on the criteria and points system outlined in Table 28. The Natural Areas were placed within a Priority Area based on the points obtained in its criteria ranking. Using the natural break classification, the Natural Areas were placed into three Priority Areas. Priority Area One contains the Natural Areas of most significance to the City.

Results

A Rochester Hills Natural Areas Map was generated that shows all of the Natural Areas and their priority ranking (Fig. 4.1. Natural Areas Map). In addition, individual maps were generated that depict each natural feature type separately (Fig. 4.2. Steep Slope Map; Fig. 4.3. Floodplain Map; Fig. 4.4. Woodland and Survey Locations; Fig. 4.5. Wetlands and Watercourses and Photo Locations Map; and Fig. 4.6. Land Use of Natural Areas Map – see pages 4.10 through 4.15). The following is a discussion of the natural features inventoried and their existing conditions within the City.

Steep Slopes

In the City, the Clinton River has created a deep river valley with steep slopes. These slopes are often in highly erodible sandy soils. As part of this NFI, a Steep Slope Map has been generated utilizing the City's one-foot contours that shows slopes between 15% and 25% and greater than 25% (Fig. 2). As expected, many of the steepest slopes are associated with the Clinton River valley and its tributaries. Currently, many steep slope areas are experiencing significant erosion as a result of development that has taken place too close to the top of the slopes.

Floodplains

Niswander Environmental has overlaid the Federal Emergency Management Agency (FEMA) floodplain map (DFIRM) over an aerial photograph to depict the floodplains within the City (Fig. 3). The map shows both the 100-year and 500-year floodplain elevations. Significant floodplain areas exist along the Clinton River valley as well as Paint Creek, Stony Creek, Galloway Creek, and Sargent Creek.

Natural Areas

Natural Areas are public and private land that are primarily undeveloped and includes lands devoted to active or passive recreational use or lands retained for visual or natural resource protection purposes. Natural Areas typically contain wetlands, woodlands, watercourses, floodplains, or active recreation areas. The City currently maintains many Natural Areas. In addition to these existing areas, several significant Natural Areas were identified during this inventory. A large portion of

these areas are associated with the Clinton River and its tributaries.

As previously described, the Natural Areas were ranked and placed within one of three Priority Areas based on the points obtained in its criteria ranking (Table 4.2). A total of 35 sites were ranked as Priority One Areas, 134 sites were ranked as Priority Two Areas, and 159 sites were ranked as Priority Three Areas (Table 4.1). All Natural Areas are shown, with Priority Area classification, on the Rochester Hills Natural Areas Map (Fig. 1). The sites were ranked on a scale of 1 to 48 points. The top five Priority One Natural Areas were identified as having significant importance to the City as outlined below. The top five Natural Areas received from 31 to 41 points with the remaining sites at 29 points and below.

- SITES 1 AND 2. *BLOOMER PARK AND OAKLAND UNIVERSITY*
  Two sites tied for the top ranking with 41 points: Bloomer Park and the Oakland University property and adjacent lands.

- SITE 3. *RIVERBEND PARK*
  Riverbend Park and adjacent lands is the number three ranked site with 33 points.

- SITE 4. *NORTHEAST STONEY CREEK AREA*
  Northeast Stony Creek Area is the number four ranked site with 32 points.

- SITE 5. *CLINTON RIVER CORRIDOR*
  The Clinton River Corridor from Crooks to Livernois Roads is ranked number five with 31 points.

In addition to the above analysis, McKenna Associates' updated Existing Land Use Map was overlaid onto the Natural Areas Map to evaluate the Existing Land Use within the Natural Areas (Fig. 6. Existing Land Use of Natural Areas). Figure 6 and Table 29 allow for the analysis of land use by type in each of the Natural Areas. For example, Table 4.3 shows that of the 1,448 acres of vacant land within the City, approximately 728 acres (50%) is located in identified Natural Areas, 236 acres (16%) is wetland, and 443 acres (31%) is woodland.

Table 4.1
Priority Areas Points Ranking

Priority Area	Points Range	Number of Natural Areas
One	22-48	35
Two	13-21	134
Three	1-12	159
Total Number of Natural Areas - 328		

Table 4.2
Natural Areas Ranking Criteria*

Criteria	Description	Detail	Points
Total Size Size is recognized as an important factor for viability of species and ecosystems.	Total size of Natural Area in acres.	<20 acres >20-80 >80-200 >200	0 1 2 4
Size of Core Area Greater core area limits negative impacts on "edge sensitive" animal species.	Acres of core area. Core area is defined as the total area minus 300 ft. buffer from edge of polygon.	0-6 acres >6-25 >25-48 >48-313	0 1 2 4
Stream Corridor Stream corridors provide wildlife connections between patches of habitat.	Presence/absence of a stream or river within the Natural Area.	None Present	0 2
Landscape Connectivity Connectivity between habitat patches is considered a critical factor for wildlife health. *Percentage*	Percentage of Natural Areas within ¼ mile.	0-11% >11-22 >22-33 >33	0 2 3 4
Proximity	Number of potential Natural Areas within 100 feet.	0 1 2 3 >4	0 1 2 3 4
Wetlands Wetlands are considered important ecosystems as they provide wildlife habitat as well as environmental benefits including flood retention, groundwater recharge, and sediment and pollutant filtering. *Percentage*	Measures the percentage of wetland within the Natural Area.	0-16% 17-41 42-70 71-100	0 1 2 4

Criteria	Description	Detail	Points
Wetlands (continued)		0-6 acres	0
Area	Measures the actual area in acres of wetland within the Natural Area.	>6-26	1
		>26-69	2
		>69-131	4
Quality	Area-weighted measure of wetland quality based on field assessment.	Low	1
		Med-Low	2
		Medium	3
		Med-High	4
		High	5
Woodlands Woodlands are considered important ecosystems as they provide wildlife habitat, critical habitat linkages, visual buffers, and improved air quality.			
		0-22%	0
		23-60	1
Percentage	Measures the percentage of woodland within the Natural Area.	61-85	2
		86-100	4
Area	Measures the actual area in acres of woodland within the Natural Area.	0-11 acres	0
		>11-44	1
		>44-116	2
		>116-247	4
Quality	Area-weighted measure of woodland quality based on field assessment.	Low	1
		Med-Low	2
		Medium	3
		Med-High	4
		High	5
Parcel Fragmentation	Measures the feasibility of conservation for a site by analyzing parcel numbers and size. Multiplies the percent area of the largest parcel in the site by the mean size of the parcels within the site.	0.00-0.46	0
		0.47-1.20	1
		1.21-2.41	2
		2.42-5.97	3
		5.98-17.99	4
Total Points - 48			

* Modified from the 2004 Oakland County Potential Conservation/Natural Areas Report criteria ranking system.

Table 4.3
Summary of Existing Land Use and Natural Areas

	City-Wide		Natural Area			Wetland			Woodland		
Land Use (ELU)	Area (acres)	% of Total Land Use	Area (acres)	% of Natural Area[1]	% of Total Land Use Type[2]	Area (acres)	% of Wetland	% of Total Land Use Type	Area (acres)	% of Woodland	% of Total Land Use Type
Single Family (Det)	**9,139.51**	50%	1145.93	28.30%	12.54%	334.96	18.22%	3.66%	993.44	31.14%	10.87%
Single Family (Att)	**331.29**	2%	50.17	1.24%	15.14%	32.04	1.74%	9.67%	38.37	1.20%	11.58%
Senior Housing	**114.93**	1%	19.49	0.48%	16.96%	2.87	0.16%	2.50%	12.03	0.38%	10.47%
Multiple Family	**546.53**	3%	92.57	2.04%	15.11%	31.40	1.71%	5.75%	59.25	1.86%	10.84%
Manufactured Housing	**220.28**	1%	15.20	0.38%	6.90%	5.13	0.28%	2.33%	4.32	0.14%	1.96%
Service Commercial	**56.33**	0%	0.87	0.02%	1.54%	-	-	-	0.55	0.02%	0.98%
Neighborhood Commercial	**62.64**	0%	0.52	0.01%	0.83%	0.66	0.04%	1.05%	0.52	0.02%	0.83%
Community Commercial	**193.15**	1%	16.32	0.40%	8.45%	2.59	0.14%	1.34%	15.05	0.47%	7.79%
Regional Commercial	**333.11**	2%	14.99	0.37%	4.50%	4.75	0.26%	1.43%	8.43	0.26%	2.53%
Office	**195.37**	1%	17.91	0.44%	9.17%	9.28	0.50%	4.75%	10.58	0.33%	5.42%
ORT	**97.51**	1%	23.17	0.57%	23.76%	9.81	0.53%	10.06%	15.36	0.48%	15.75%
Light Industrial	**718.93**	4%	70.39	1.74%	9.79%	32.71	1.78%	4.55%	16.36	0.51%	2.28%
School	**555.35**	3%	92.64	2.29%	16.68%	40.14	2.18%	7.23%	78.79	2.47%	14.19%
Higher Education	**948.73**	5%	396.18	9.79%	41.76%	153.49	8.35%	16.18%	301.85	9.46%	31.82%
SP	**40.73**	0%	3.04	0.08%	7.46%	2.14	0.12%	5.25%	2.71	0.08%	6.65%
ROW	**57.63**	0%	31.07	0.77%	53.92%	3.27	0.18%	5.67%	3.18	0.10%	5.52%
Public/Semi Public	**650.18**	4%	199.55	4.93%	30.69%	116.08	6.31%	17.85%	114.95	3.60%	17.68%
Park	**732.78**	4%	556.50	13.74%	75.94%	211.02	11.48%	28.80%	363.58	11.40%	49.62%
Open Space	**1,309.94**	7%	1020.67	25.21%	77.92%	534.08	29.05%	40.77%	590.22	18.50%	45.06%
Vacant	**1,447.87**	8%	720.63	17.80%	49.77%	236.45	12.86%	16.33%	442.65	13.87%	30.57%
Utility	**116.47**	1%	72.84	1.80%	62.54%	17.96	0.98%	15.42%	32.95	1.03%	28.29%
Landfill	**402.71**	2%	196.47	4.85%	48.79%	35.31	1.92%	8.77%	85.33	2.67%	21.19%
Lake	**22.78**	0%	22.34	0.55%	98.05%	22.44	1.22%	98.49%	-	-	-
Total:	**18,294.74**		**4,048.83**		**22%**	**1,838.58**		**10%**	**3,190.47**		**17%**

1. % of Natural Area = Area of Natural Area/Total Area of Natural Area
2. % of Total Land Use Type = Area of Natural Area/Area of City/Wide Land Use

Recommendations

Identification of the significant natural features in the City is key to determining the future land use and preservation plan for the City. The NFI will allow for responsible/integrated land use and also provide a tool for measuring how the City's natural features change over time and what management strategies might be needed to protect them. Finally, this NFI will allow for an evaluation of what effect a proposed project will have on natural features at a landscape level. The following is a discussion of the natural features that are of primary concern to the City and the recommended steps for protecting them.

Steep Slopes

Protection of the Clinton River and adjacent personal property is of paramount importance to the City. Many of the City's steep slope areas are in need of restoration and/or protection from further degradation. The generation of the Steep Slope Map is the first step in the process of protecting these steep slopes and associated natural features. Niswander Environmental has evaluated the City of Ann Arbor's Steep Slope Ordinance and several other model steep slope ordinances to determine what steps the City should take to protect these areas of concern. The purpose of a steep slope ordinance is to regulate the intensity of use in steep slope areas to limit soil loss, erosion, excessive stormwater runoff, degradation of surface water, and loss of personal property. Steep slope ordinances typically require an analysis of slopes greater than 15% to show that the impacts have been minimized and that slopes have been adequately protected with appropriate soil erosion control measures during and after construction. Disturbances to slopes greater than 25% should be avoided except when no feasible or prudent alternatives exist. The results of this NFI indicate that the City is in need of such a steep slope ordinance to protect these natural resources. In addition, implementation of restoration activities along the Clinton River through grants, such as those undertaken by Watershed Councils, could repair existing slope degradation. Finally, acquisition of property in this corridor could further prevent additional degradation due to development.

Floodplains

The City currently has a Floodplain Ordinance that protects floodplains and requires permits for any activities within the floodplain. The Floodplain Map generated by this NFI can be used for planning purposes; however, it is recommended that the FEMA Flood Insurance Studies be used when evaluating individual properties. It should be noted that FEMA is currently completing an update to Oakland County's FEMA floodplain maps and the City's Engineering Department has attended preliminary meetings. The City's Floodplain Map should be updated as soon as the revised FEMA floodplain maps are available.

Wetlands and Watercourses

The City currently has a Wetland and Watercourse Ordinance that protects these natural features from irresponsible development. The ordinance prohibits development within a lake or stream or within a wetland that is greater than 2 acres in size or contiguous to a lake or stream without a permit. The NFI identified 1,839 acres of wetland within the City, which constitutes 10% of the City's total land use. Of the 1,310 acres of the City's designated open space, approximately 40% of it is wetland. This testifies that the current Wetland Ordinance is adequately protecting the City's wetlands by encouraging the placement of wetlands into the City's open space system. Of the 1,448 acres of vacant land within the City, approximately

16% is wetland. Therefore, there is still wetland that has the potential to be protected within the City and possibly incorporated into the City's protected open space.

The Wetlands and Watercourse Map will provide the City with a tool to better implement its existing ordinance. The map shows more detailed information on the location and types of wetland than was previously available and thus will enable the City to be better informed during the site review process. Furthermore, wetlands can be evaluated in a landscape context. However, the map provides only potential and approximate location of wetlands and does not determine specific boundaries. It also does not implicate any regulatory status. Therefore, a professional wetland delineation and jurisdictional assessment will still be required for any new development. This map is also meant to be a dynamic tool that can be integrated with the City's GIS and updated as new information becomes available (i.e. wetland delineations are completed).

WOODLANDS

This NFI identified woodland areas that are of high quality and should be protected as discussed in the Open Space and Natural Areas section. The NFI identified 3,190 acres of woodland within the City, which constitutes 17% of the City's total land use. Of the 1,310 acres of the City's designated open space, approximately 45% is woodland. Of the 1,448 acres of vacant land within the City, approximately 31% is woodland.

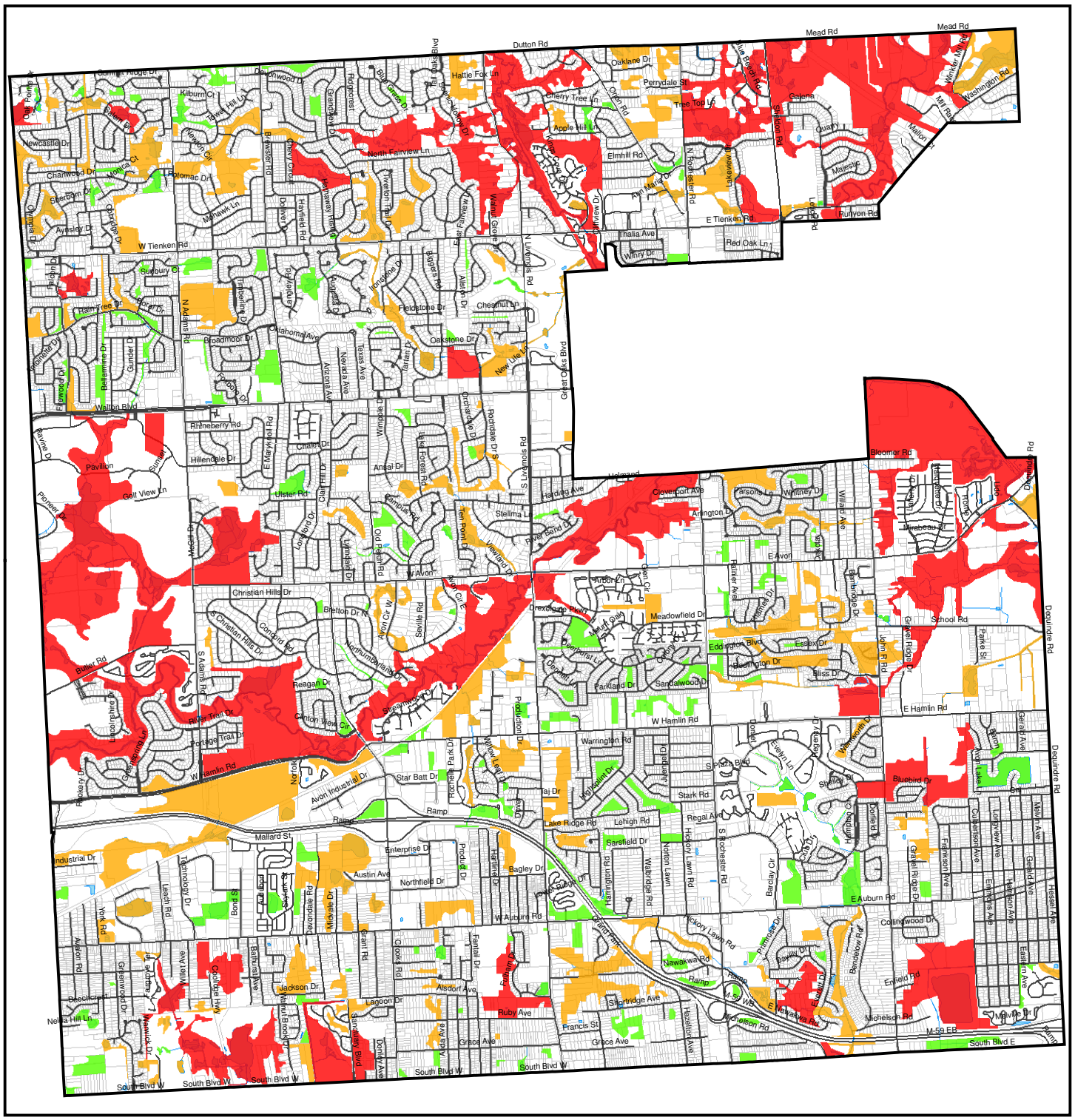
The updated Woodland Map will provide a tool for the City to better achieve the purpose of its Tree Conservation Ordinance to "Protect the woodlands, including trees and other forms of vegetation, of this city for their economic support of local property values when allowed to remain uncleared and/or unharvested and for their natural beauty, wilderness character, and their geological, ecological, or historical significance". The City's current Tree Conservation Ordinance does not identify specific protected woodland areas, but only protects individual trees (Historic Trees, Landmark Trees, or trees greater than 6 inches d.b.h.). Therefore, it may be beneficial to amend the City's existing Tree Conservation Ordinance to include the Woodlands Map that identifies protected woodland areas and include language to protect such areas.

NATURAL AREAS

The five priority Natural Areas identified by ranking the existing natural features within the City should be protected to the greatest extent possible. These sites are an integral part of protecting the City's remaining natural resources. The criteria developed for ranking these sites included connectivity to adjacent Natural Areas in addition to number of parcels covering the area. These criteria were incorporated in order to determine which areas would be best for acquisition by the City. The Existing Land Use of Natural Areas Map (Fig. 6) shows the Natural Areas identified in this NFI by Priority with the existing land use classifications identified in December 2004. This map is critical in identifying how to protect the Priority Areas by incorporating available parcels into the City's open space. Portions of Sites 1, 2 and 3 are already either public or open space land use and include a number of vacant parcels adjacent to these Natural Areas. Acquisition of these vacant parcels could ensure the protection of these Natural Areas. Sites 4 and 5 are stream corridors that could be protected through the Wetland and Watercourse Ordinance and/or a Steep Slopes Ordinance if adopted. Available parcels should also be protected or acquired along these corridors to adequately protect these valuable resources.

Summary

This report provides a brief summary of the findings of the NFI and Priority Natural Areas; however, it should be noted that the NFI has been developed in a GIS and is intended to be used on a daily basis by the City staff when evaluating land use. The power of the GIS-based NFI is that detailed information, including photographs, quality assessment, restoration potential, ownership, land use, aerial photographs, field assessment data, connectivity, and disturbance can all be assessed instantaneously with the click of a button. Furthermore, the NFI has developed data for steep slopes, woodlands, and wetlands that was not previously available. The NFI has the potential to affect immediate and long-term land use decisions.



Rochester Hills Natural Features Inventory

Figure 1. Natural Areas
May 1, 2005

Natural Areas 2005
(identified by Niswander Environmental)

- Priority One
- Priority Two
- Priority Three

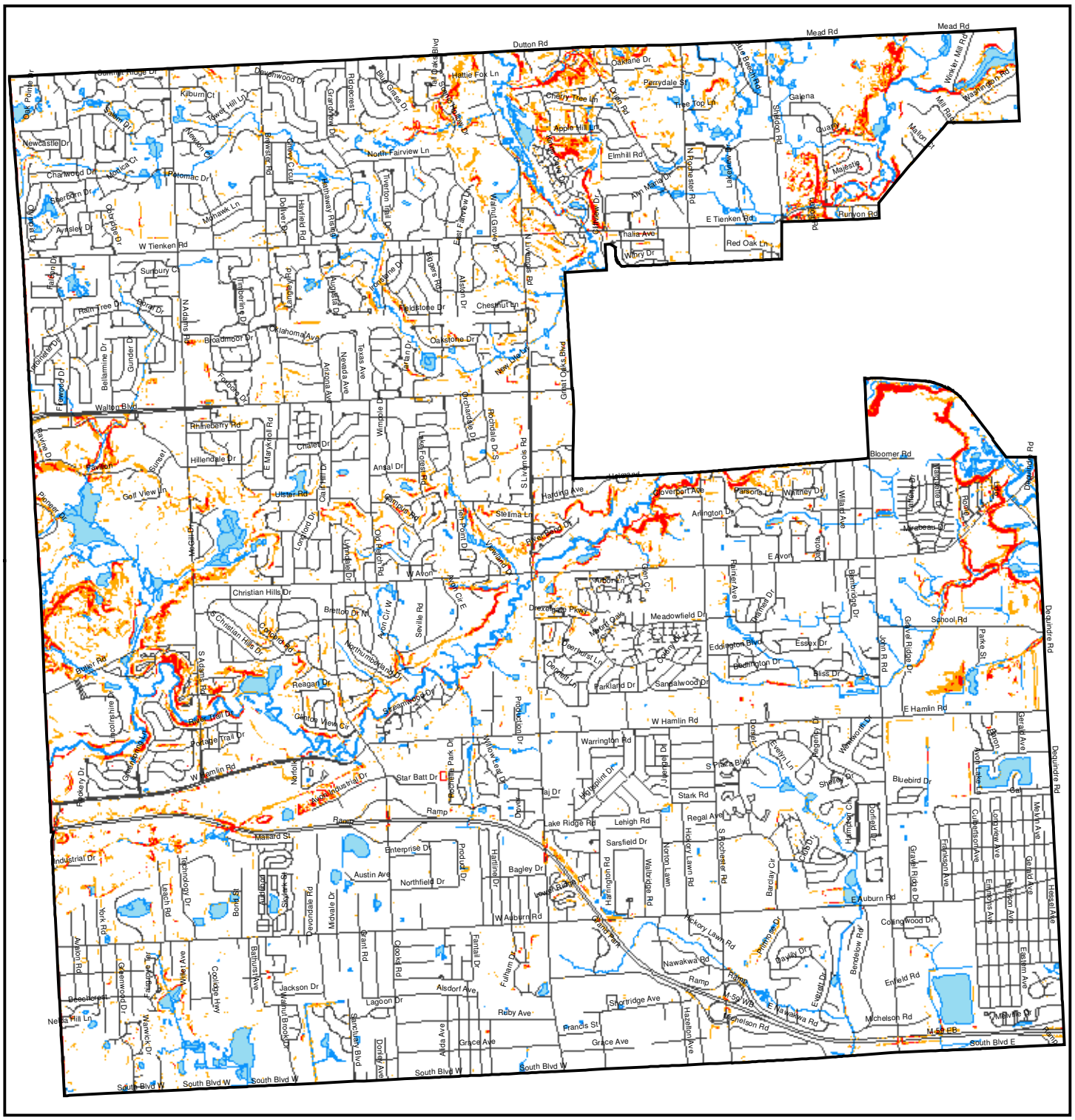
N
W E
S

0 0.5 1 2 Miles

City of ROCHESTER HILLS

NISWANDER ENVIRONMENTAL, LLC
10218 Buno Rd, Brighton, MI 48114 810.225.0539

McKenna Associates Incorporated



Rochester Hills Natural Features Inventory

Figure 2. Steep Slopes

Data Collected October 1 through December 8, 2004
Map Created May 1, 2005

Steep Slopes

- 0-15%
- 15-25%
- >25%

N
W E
S

0 0.5 1 2 Miles

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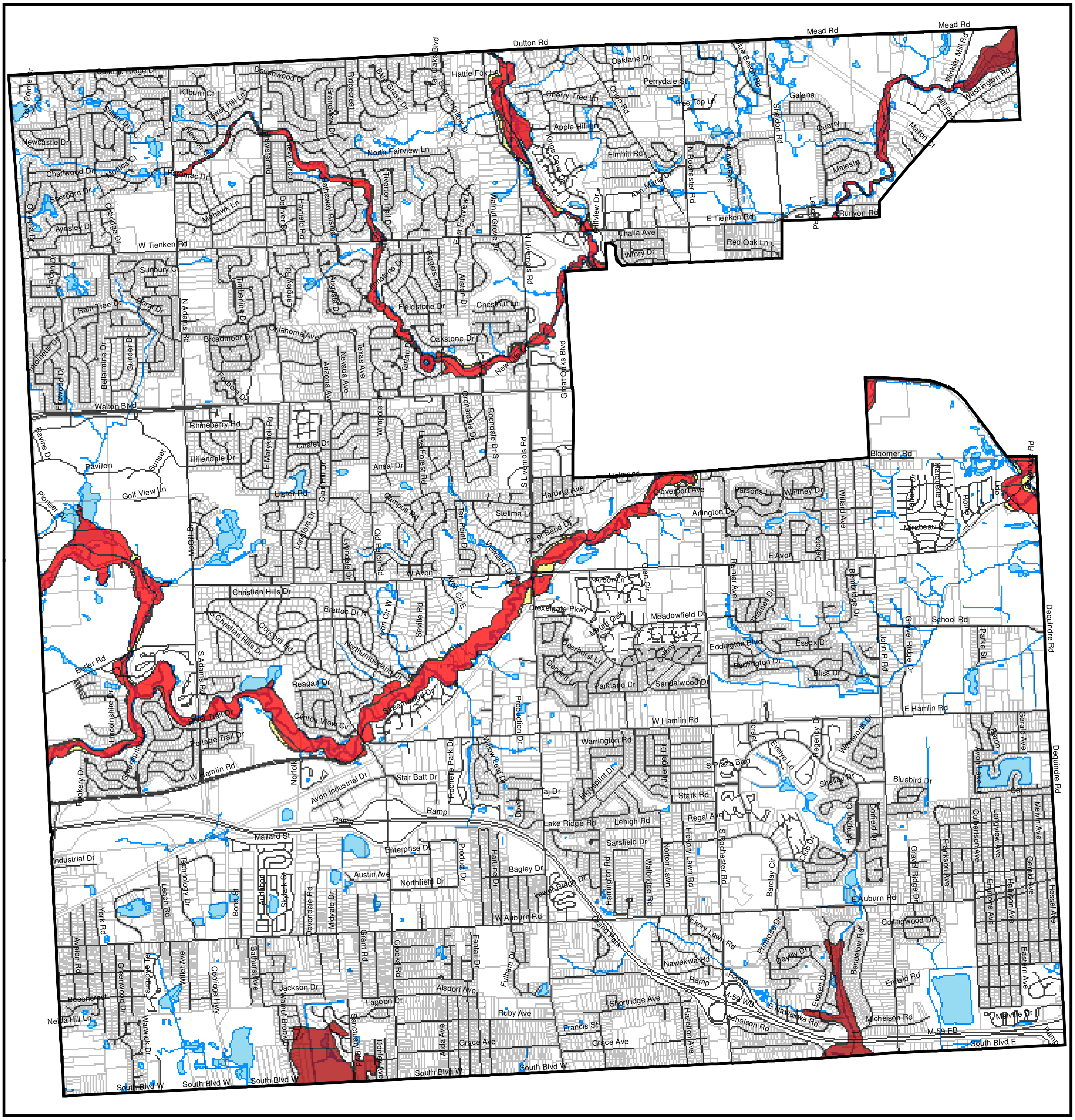

Rochester Hills Natural Features Inventory

Figure 3. FEMA Floodpain Map

Data Collected October 1 through December 8, 2004
Map Created May 1, 2005

Floodplain (FIRM Map)

- 100-year floodplain approximate
- 100-year floodplain detailed
- 500-year floodplain

N
W E
S

0 0.5 1 2
Miles

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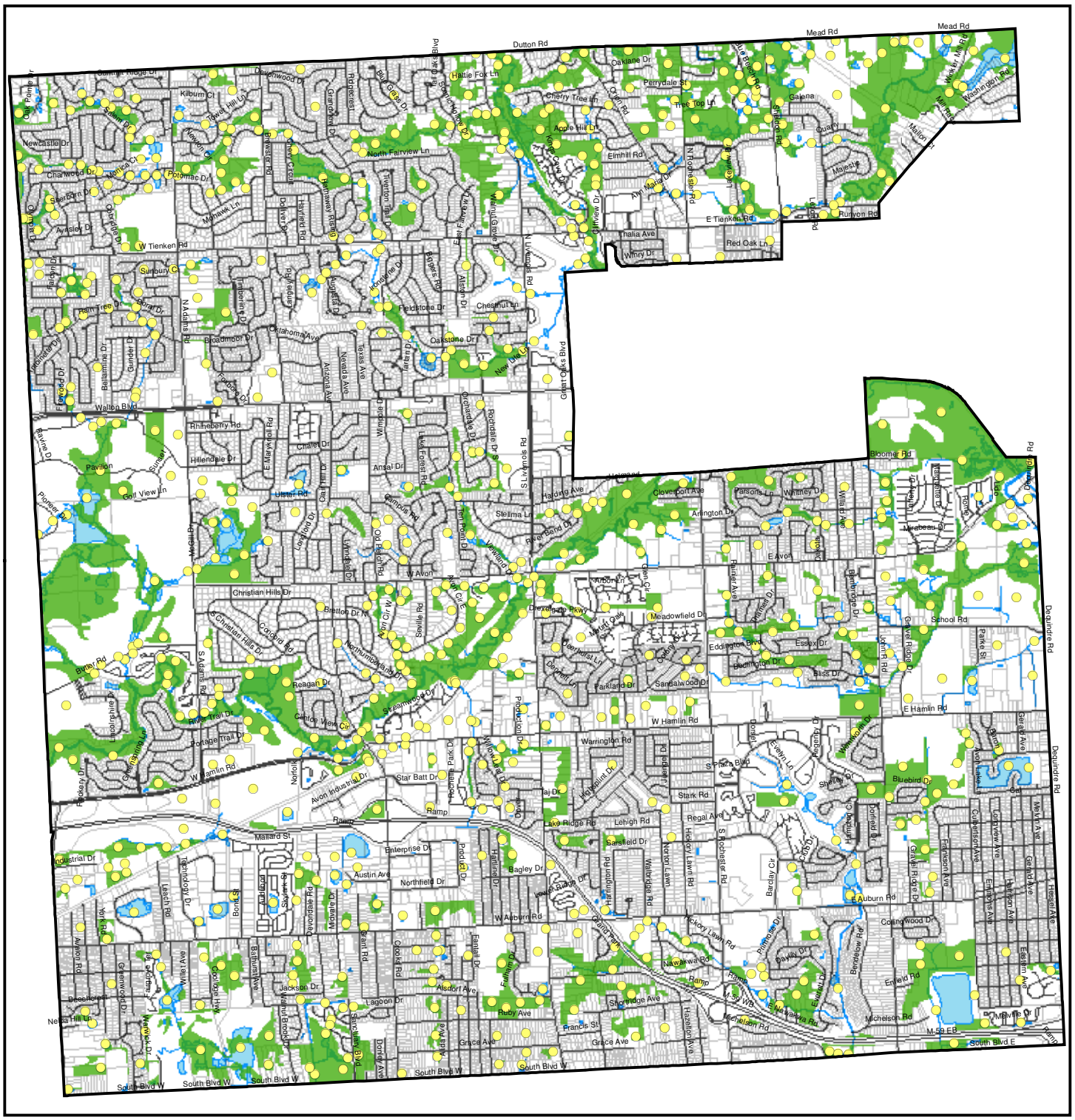

Rochester Hills Natural Features Inventory

Figure 4. Woodlands and Survey Locations

Data Collected October 1 through December 8, 2004
Map Created May 1, 2005

Woodland 2005
(identified by Niswander Environmental)

- Woodland
- Survey Location

N
W E
S

0 0.5 1 2 Miles

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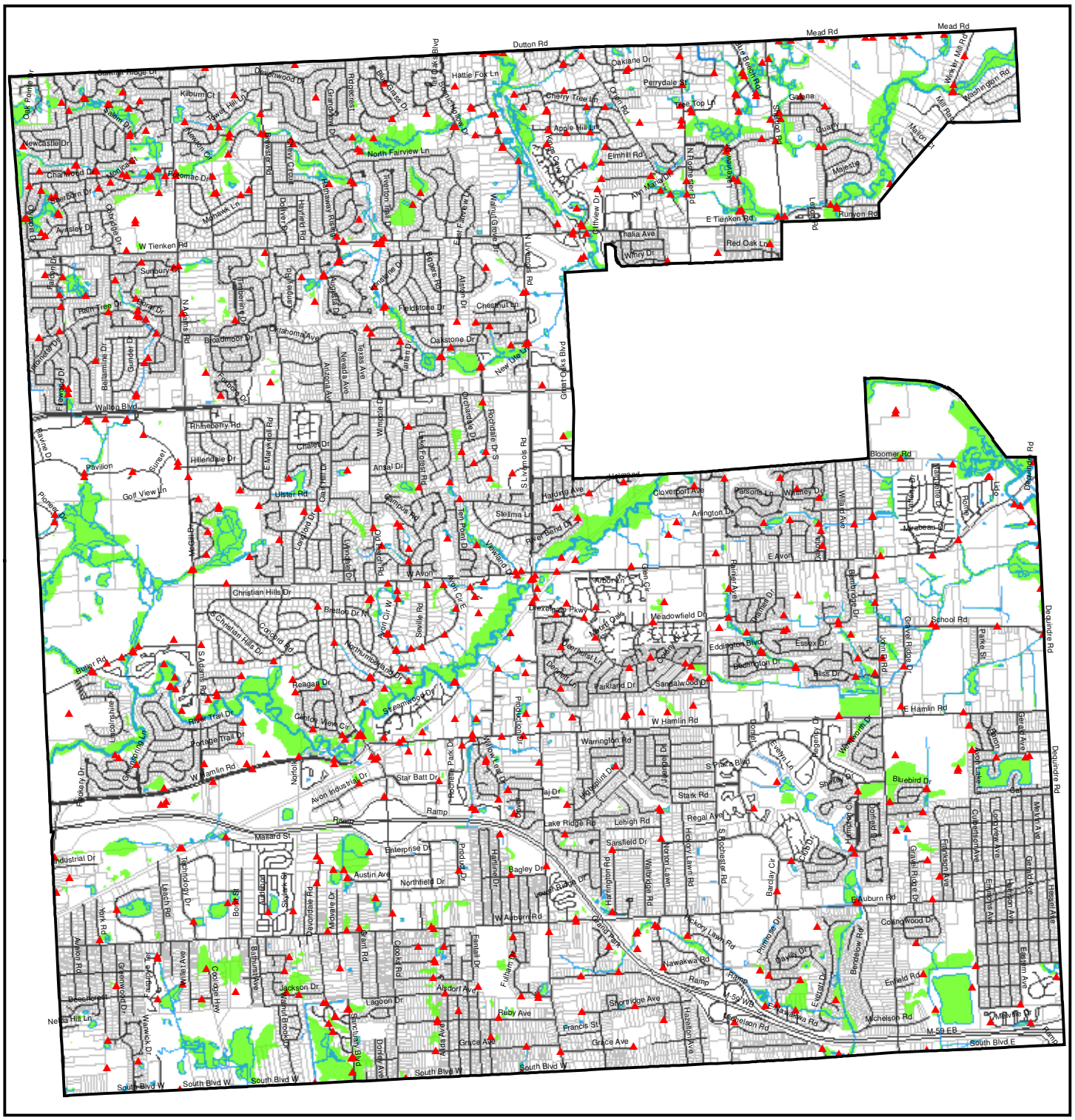

Rochester Hills Natural Features Inventory

Figure 5. Wetlands and Photo Locations

Data Collected October 1 through December 8, 2004
Map Created May 1, 2005

Wetland 2005
(identified by Niswander Environmental)

- Wetland
- Photo Location

N
W E
S

0 0.5 1 2 Miles

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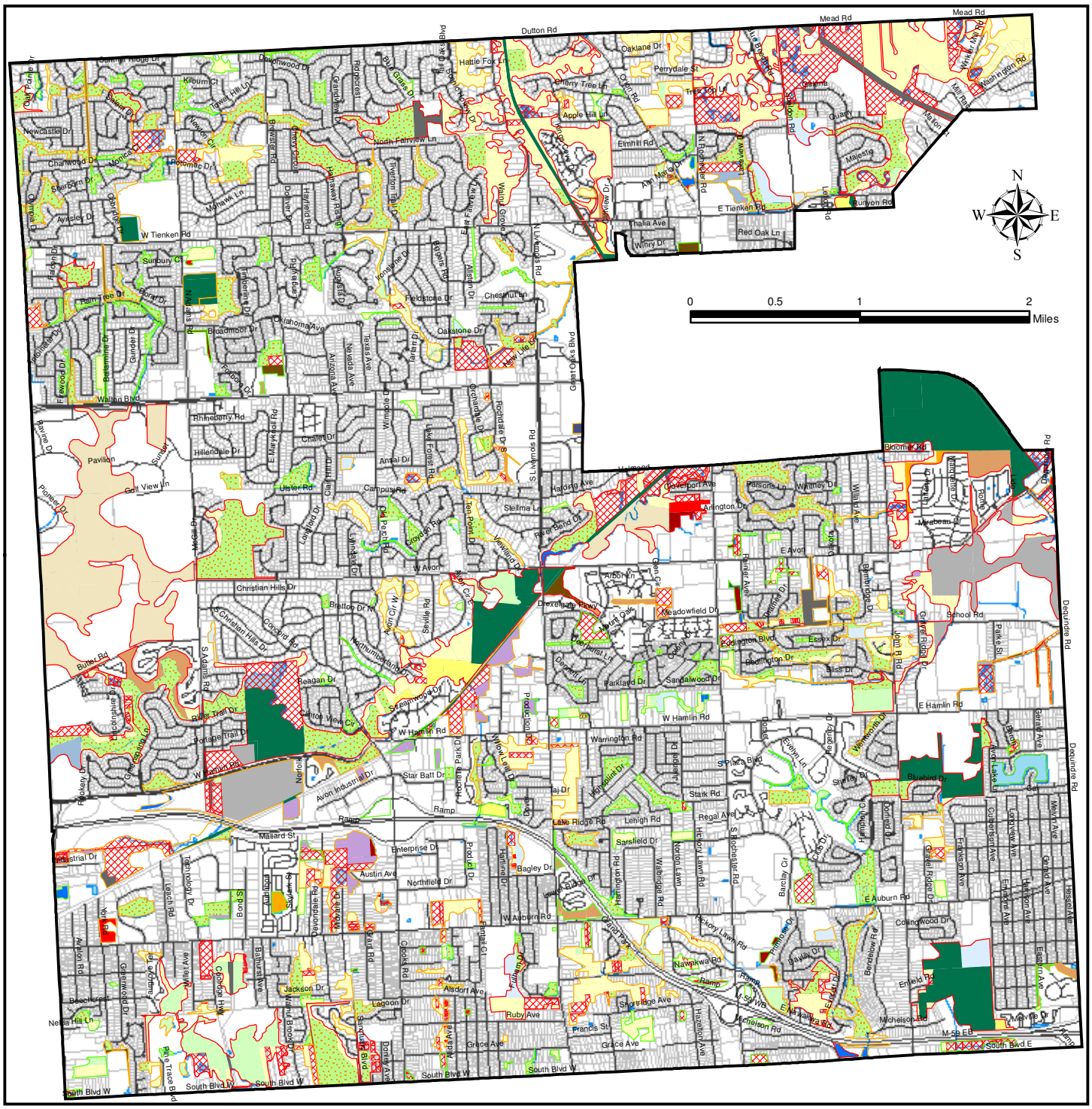


Rochester Hills Natural Features Inventory

Figure 6. Existing Land Use of Natural Areas

Data Collected October 1 through December 8, 2004; Map Created May 1, 2005

Land Use (ELU)

- Landfill
- Single Family (Att)
- Single Family (Det)
- Multiple Family
- Manufactured Housing
- Senior Housing
- Higher Education
- Neighborhood Commercial
- Service Commercial
- Community Commercial
- Regional Commercial
- Office
- ORT
- SP
- Light Industrial
- Heavy Industrial
- Park
- Public/Semi Public
- Open Space
- School
- Utility
- Vacant
- ROW
- LAKE

Natural Areas 2005

- Priority One
- Priority Two
- Priority Three

City of ROCHESTER HILLS

NISWANDER ENVIRONMENTAL, LLC
10218 BUNO RD, BRIGHTON, MI 48114 810.225.0539

McKenna ASSOCIATES INCORPORATED

5. Economic Development Analysis and Strategy

This chapter presents an overview of Rochester Hills' tax base, fiscal outlook, and existing market conditions within the City, a Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis, and finally a set of economic development goals and objectives.

Tax Base Analysis

This chapter of the Master Plan analyzes the City's revenues and expenditure trends. As described in more detail below, 52.7 percent of the City's total revenues are derived from property taxes. Because the Master Plan's land use and development policies affect property values, the implications of land planning on revenues and expenditures are evaluated.

Revenues

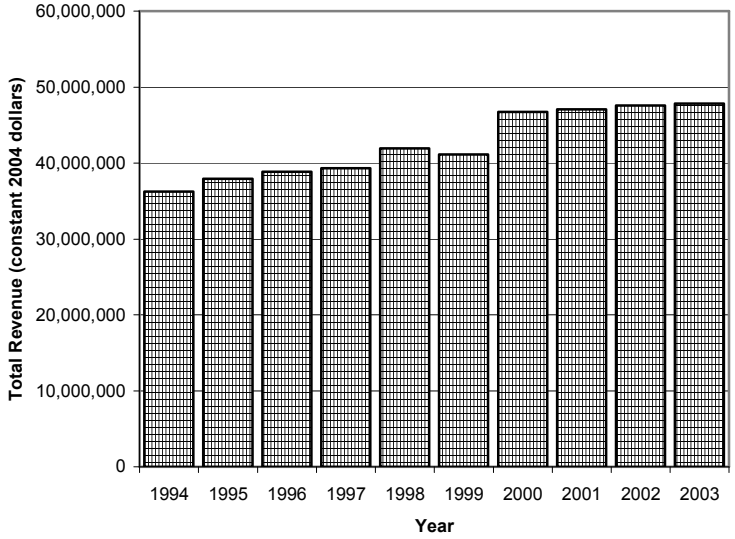
The City's total revenue for 2003 was $46,435,453. Adjusting for inflation, the City's total revenue increased $11,551,130 (in constant dollars) or 31.9 percent from 1994 through 2003. The average annual, inflation adjusted increase in total revenue was 3.2 percent per year over the ten year period. The City's total revenue from 1994 through 2003 is depicted in Figure 5.1.

Revenue Sources

The City's revenue in 2003, categorized by source of funds, is depicted in Figure 5.2. Clearly, the largest source of revenues is property taxes, which constituted 52.7 percent of total revenues in 2003.

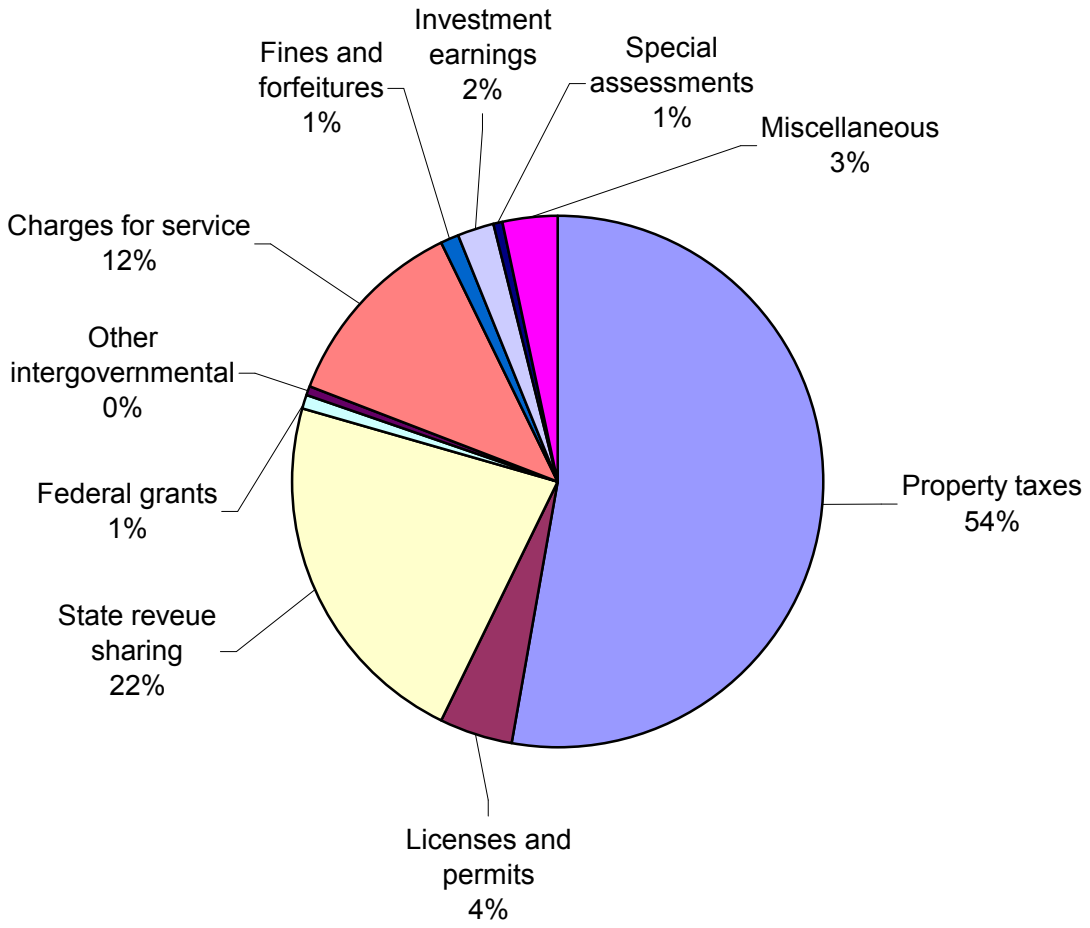
Other important sources of revenue include state grants, 22.3 percent of total revenues, charges for service, 12.1 percent, and licenses and permits, 4.4 percent. The remaining sources of funds collectively account for less than 5 percent of total revenues.

Figure 5.1
Total Annual Revenue in Constant 2004 Dollars, Rochester Hills, 1994 to 2003



Source: McKenna Associates, Inc., with data from the Comprehensive Annual Financial Report, 2003.

Figure 5.2
Revenue Sources by Percentage of Total Revenue
Rochester Hills, 2003



Source: McKenna Associates, Inc., with data from the Comprehensive Annual Financial Report for 2003

Changes in Revenue Sources

As discussed above, the City's total revenue increased 31.9 percent, adjusted for inflation, from 1994 through 2003. The amount of revenue generated from each of the revenue sources also changed over time. The inflation adjusted increase in each revenue source, as a percentage of the increase in total revenue, between 1994 and 2003 is presented in Table 5.1.

Table 5.1
Increase in Revenue Sources as a Percentage of Total Revenue Increase
Rochester Hills, 1994 to 2003

Revenue Source	Percentage of Total Revenue Increase
Property taxes:	51.7
Licenses and permits:	1.8
Intergovernmental	
- State grants:	12.0
- Federal grants:	0.7
- Other intergovernmental:	0.2
Charges for service:	35.9
Fines and forfeitures:	1.9
Investment earnings:	-10.2
Special assessments:	-3.6
Miscellaneous:	9.6
TOTAL:	100.0

Source: McKenna Associates, Inc., with data from the Comprehensive Annual Financial Report for 2003.

Growth in property taxes accounted for more than half of the increase in the City's total revenues from 1994 to 2003. Other important sources of increased revenue include charges for service, 35.9 percent, and state grants, 12.0 percent.

Two sources, investment earnings and special assessments, have decreased in real terms. The decrease in investment earnings is due to the declining fund balance. The decrease in special assessments is expected because special assessments decrease over the life of the assessment.

Property taxes constitute more than half of the City's revenues and accounted for more than half of the increase in total revenues. Property taxes are analyzed in the following section.

Property Taxes

Property taxes are levied on both real and personal property. Subsequent sections analyze the City's tax base (the amount and types of property from which property taxes are collected) and the trend in property tax revenues. The following brief description of property taxes is taken from the Citizen Research Council of Michigan.

> The distinction between real and personal property is relatively straightforward. Real property is basically land and buildings. Personal property is generally movable and not affixed to the land. Personal property includes a broad array of assets, including most equipment, furniture, and fixtures used by businesses. In addition, electric transmission and distribution equipment, gas transmission and distribution equipment, and oil pipelines are all considered personal property.
>
> Establishing the assessed value of real versus personal property involves different methodologies, although all taxable property is required to be assessed at 50% of true cash value, the state equalized valuation. Real

property assessments are developed by comparing similar properties and principally use sales and cost data to establish assessment changes. Personal property assessments use acquisition costs adjusted by depreciation multipliers to reflect declining values, as an asset ages.

Property taxes are determined by multiplying the tax rate times the taxable value of a parcel of property. The taxable value of a parcel may differ from the state equalized value due to limits on increases placed in the Michigan Constitution by Proposal A of 1994. Taxable value may not rise by more than the lesser of the increase in the consumer price index or 5%. The methodology used to assess personal property virtually assures that a parcel's assessed and taxable values will be the same. In contrast, the aggregate of real property reflected a gap of over 20% between assessed and taxable values in 2002.

Total Taxable Value
The total taxable value of property in the City in 2003 was $3,064,862,240. The total taxable value in that year was 84.2 percent of the SEV, which is less of a differential than for all of Oakland County where taxable value was 79.3 percent of SEV. Adjusted for inflation, the City's total taxable value increased $742,933,724, or 30.8 percent from 1994 through 2003. The average annual, inflation adjusted increase in taxable value was 3.0 percent during this period.

Real and Personal Taxable Value
From 1994 to 2003, the inflation adjusted taxable value of real property increased 31.5 percent, for an average annual increase of 3.1 percent. In contrast, the inflation adjusted taxable value of personal property increased 21.8 percent from 1994 to 2003, for an average annual increase of 2.5 percent.

In 2003, real property accounted for 93.3 percent of the City's taxable value, and personal property made up the remaining 6.7 percent. From 1994 through 2003, the increase in taxable value of real property accounted for 94.9 percent of the increase in total taxable value.

Real Property Tax Base
Under Michigan law, the City's real property tax base is categorized into six classes:

- Agricultural
- Commercial
- Industrial
- Residential
- Timber Cut Over
- Developmental

The composition of the City's real property tax base is presented in Table 5.2, and compared to other Oakland County communities.

The most salient characteristic of the City's real property tax base evident in Table 5.2 is the size of the residential portion of the tax base. Residential real property constitutes 79.8 percent of the City's real property tax base, a larger portion than in Oakland County, Oakland County's cities, and all the adjacent communities except Oakland Township. The City's large

residential base is offset with a lower portion of the tax base in the commercial and industrial classifications.

The structure of the City's tax base is similar to the real property tax base of Oakland County as a whole, although the City has a slightly higher residential percentage and a slightly lower commercial percentage.

Table 5.2
Real Property Classes by Percentage of Total Real Property Tax Base,
Rochester Hills and Selected Communities, 2004

	Rochester Hills	All Oakland Co. Cities	Oakland County	Troy	Auburn Hills	Oakland Township
Agricultural	0.0	0.0	0.2	0.0	0.0	0.3
Commercial	13.5	23.8	17.8	29.2	36.1	2.7
Industrial	6.7	9.4	6.6	10.8	43.6	0.3
Residential	79.8	66.7	75.4	60.1	20.3	96.7
Timber Cut Over	0.0	0.0	0.0	0.0	0.0	0.0
Developmental	0.0	0.1	0.1	0.0	0.0	0.0

Source: McKenna Associates, Inc., with data from Oakland County's 2004 Equalization Report.

Personal Property Tax Base

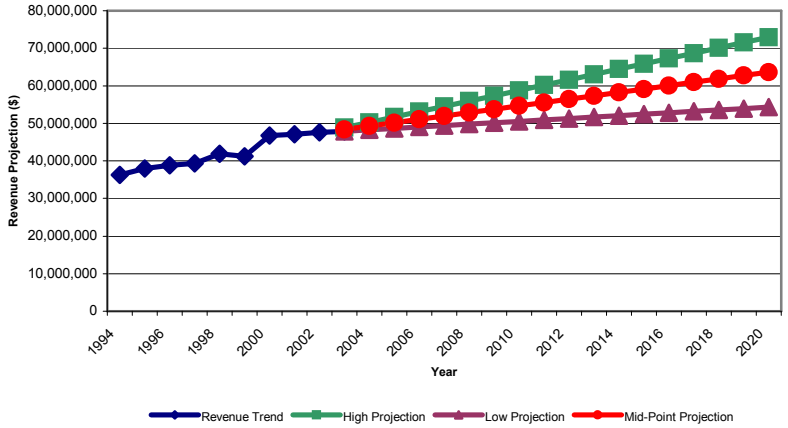
In 2003, personal property constituted 6.7 percent of the City's taxable property value. Adjusted for inflation, the taxable value of personal property increased $37,955,376 from 1994 to 2003.

The inflation adjusted growth rate for taxable personal property was 21.8 percent over the ten-year period, or an average 2.5 percent per year.

Revenue Projection

The revenue projection is based on the inflation adjusted revenue trend, by revenue source. A linear projection is applied to the data to generate a separate projection for each revenue source. The separate projections are summed to generate the projection of total revenues. Figure 5.1 on page 5.1 shows that the total revenue trend was generally increasing from 1994 through 2000. Increases in total revenue were significantly lower from 2000 through 2003. Revenue projections based on the entire trend from 1994 to 2003 are larger than projections based only on the period from 2000 through 2003. Averaging the high and the low projections generates a mid-point projection. The high, low, and mid-point projections are depicted graphically in Figure 5.3.

Figure 5.3
Total Revenue Trend and Projection
Rochester Hills, 1994-2020

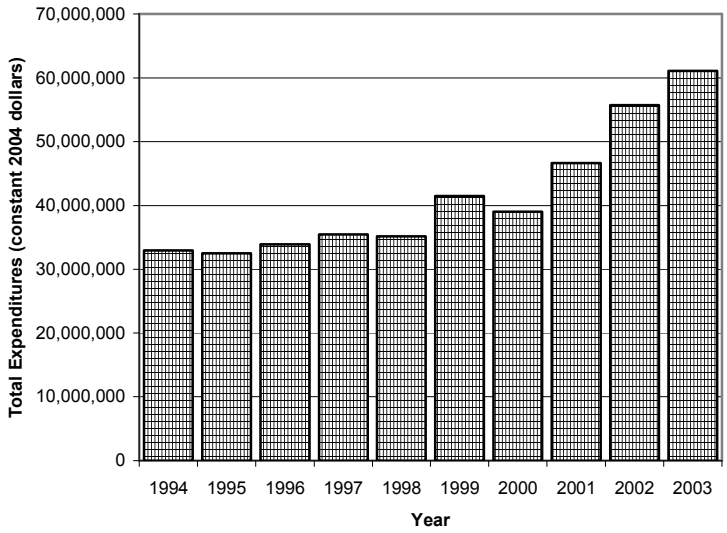


Note: Revenue projections are in constant 2004 dollars.

Source: McKenna Associates, Inc.

Figure 5.3 on the preceding page shows that if the total revenue trend from 1994 to 2003 continues, the City's total revenue in 2020 would be $72,949,061. However, if the total revenue trend from 2000 to 2003 continues, the City's total revenue in 2020 would be only $54,323,597. For the purpose of this tax base analysis, we assume that future revenues will be half way between the high and low projection (the mid-point projection in Figure 5.1). The total revenue projected in 2020 based on the mid-point projection is $63,636,329.

Figure 5.4
Total Annual Expenditures in Constant 2004 Dollars, Rochester Hills, 1994 through 2003



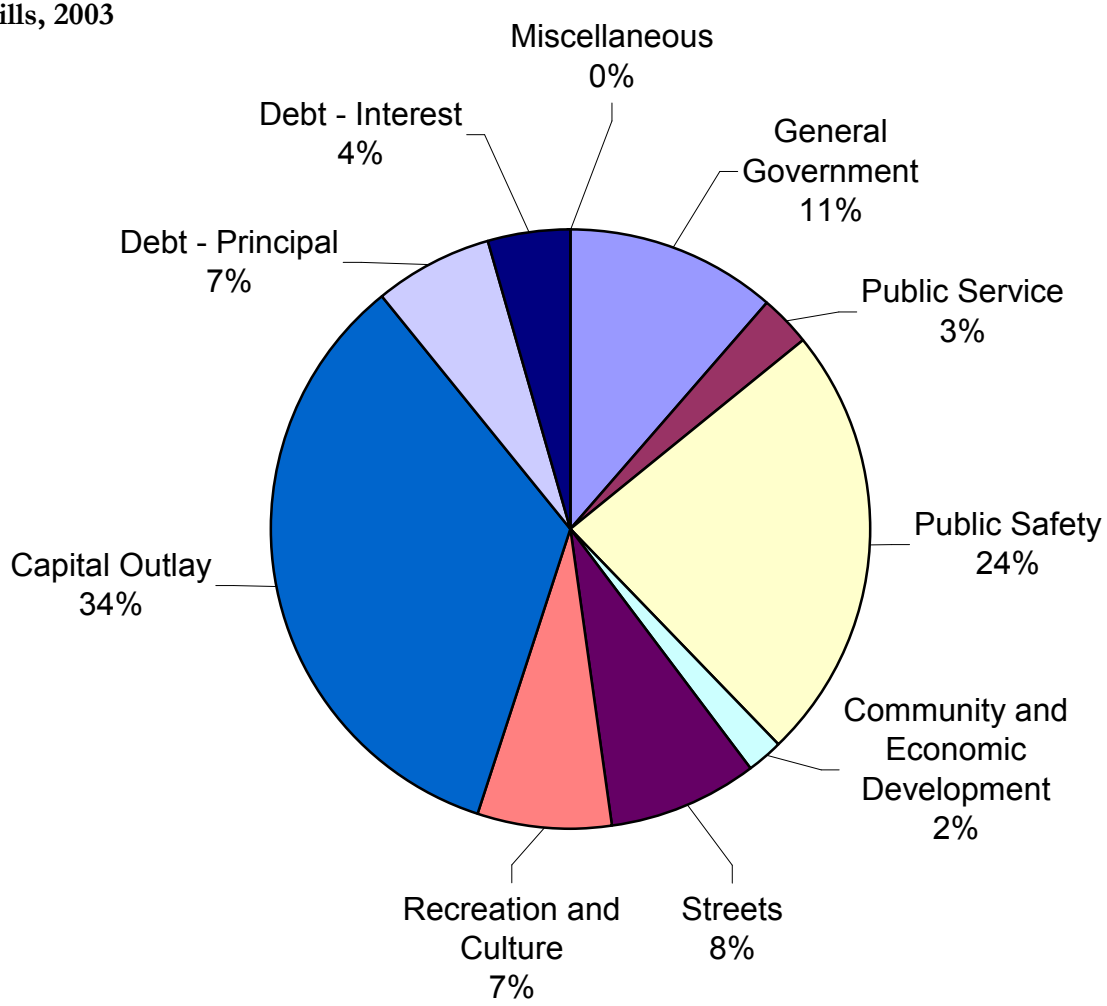
Source: McKenna Associates, Inc., with data from the Comprehensive Annual Financial Report, 2003.

Expenditures

Total Expenditures
The City's total expenditures in 2003 were $59,307,908. Adjusting for inflation, the City's total expenditures increased $28,078,150, or 85.1 percent from 1994 through 2003. The average annual, inflation adjusted increase in total expenditures was 7.5 percent per year over the ten year period. The corresponding average annual, inflation adjusted increase in total revenues was 3.2 percent per year during the same period. The City's total expenditures from 1994 through 2003 is depicted in Figure 6.

Expenditures by Function
The City's expenditures in 2003, categorized by source of funds, are depicted in Figure 5.5 on the following page. Clearly, the largest expenditure was for capital outlays (34.0 percent of total expenditures) and public safety (23.5 percent).

Figure 5.5
Expenditures by Function as a Percentage of Total Expenditures,
Rochester Hills, 2003



Source: McKenna Associates, Inc., with data from the Comprehensive Annual Financial Report, 2003.

Changes in Expenditures

As discussed above, the City's total expenditures increased 85.1 percent, adjusted for inflation, from 1994 through 2003. Expenditures in each category also changed over time. The inflation adjusted increase in each category of expenditures, as a percentage of the increase in total expenditures, between 1994 and 2003 is presented in Table 5.3.

Table 5.3
Expenditure by Category as a Percentage of Total Expenditures Increase,
Rochester Hills, 1994 to 2003

Expenditure Category	Percentage of Total Expenditures Increase
General Government:	3.6%
Public Service:	4.8%
Public Safety:	15.6%
Community and Economic Development:	1.5%
Streets:	-0.9%
Recreation and Culture:	7.7%
Capital Outlay:	63.7%
Debt – Principal:	5.6%
Debt – Interest:	-1.7%
Miscellaneous:	0.2%

Source: McKenna Associates, Inc., with data from the Comprehensive Annual Financial Report for 2003.

Expenditures for capital outlays and public safety accounted for 79.3 percent of the City's total increase in expenditures from 1994 to 2003. During this time period, expenditures for streets and interest payments have decreased in real terms.

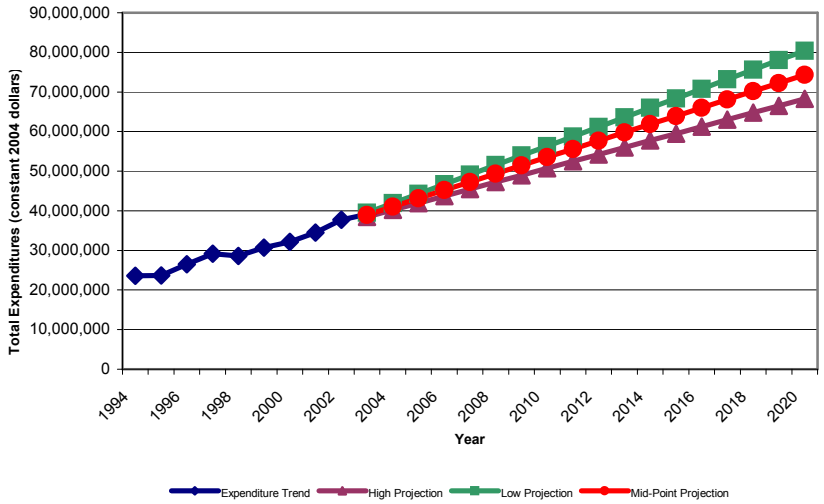
Expenditure Projection

The expenditure projection is based on the inflation adjusted expenditure trend, by expenditure category. A linear projection is applied to the data to generate a separate projection for each expenditure category. The separate projections are summed to generate the projection of total expenditures. The projected expenditures are reduced for the analysis to reflect capital outlays that are financed through bonds.

As with the revenue projections, high and low expenditure projections are derived by varying the time period used to generate the projection. A mid-point projection is based on the mid-point between the high and low projections. The high, low, and mid-point projections are depicted graphically in Figure 5.6 on the next page.

If the total expenditures trend from 1994 to 2003 continues, the City's total expenditures in 2020 would be $ 68,268,037. If the total expenditure trend from 2000 to 2003 continues, the City's total expenditures in 2020 would be $ 80,418,722. For the purpose of this tax base analysis, we assume that future expenditures will be half way between the high and low projection. The total expenditure projected in 2020 is $74,343,379.

Figure 5.6
Total Expenditure Trend and Projection, Rochester Hills, 1994 to 2020



Note: Revenue projections are in constant 2004 dollars.
Source: McKenna Associates, Inc.

Projected Annual Revenues and Expenditures

The projected annual revenues and expenditures are compared in Table 5.4. Based on the assumptions and projections presented previously, if present trends continue, City expenditures will exceed revenues in 2012. The project level of revenues and expenditures will become unsustainable.

Table 5.4
Comparison of Projected Revenues and Expenditures, Rochester Hills, 2005 to 2020

Year	Revenues	Expenditures	Difference
2005	51,053,085	43,131,272	7,921,813
2006	51,951,888	45,212,079	6,739,809
2007	52,850,691	47,292,886	5,557,805
2008	53,749,494	49,373,693	4,375,801
2009	54,648,297	51,454,500	3,193,797
2010	55,547,101	53,535,308	2,011,793
2011	56,445,904	55,616,115	829,789
2012	57,344,707	57,696,922	-352,215
2013	58,243,510	59,777,729	-1,534,219
2014	59,142,313	61,858,536	-2,716,223
2015	60,041,116	63,939,344	-3,898,227
2016	60,939,919	66,020,151	-5,080,231
2017	61,838,723	68,100,958	-6,262,235
2018	62,737,526	70,181,765	-7,444,239

Source: McKenna Associates, Inc.

The basic options to correct the projected difference between revenues and expenditures are:

1. Increase revenues through increased taxes, increased charges for services, etc.
2. Increase revenues by expanding the tax base to generate additional revenues.
3. Reduce expenditures by reducing the level of services provided.
4. Reduce expenditures through cost saving measures.

The remainder of this Chapter discusses ways in which these four options can be addressed through land use planning and development policies.

Market Analysis

This section of the Master Plan assesses the regional economy and the City's role within the regional economy. The purpose of this chapter is to provide an understanding of the economic and market forces that will drive demand for land for development and redevelopment.

Base Economic Sectors

Economic base theory holds that an economy's health depends on the vitality of its export industries, also know as base industries or primary industries. These firms sell or "export" their products and services outside the community and bring new dollars into the community, increasing the total dollars that circulate within the community and that are spent on non-base industries. Non-base industries serve the local market, such as movie theatres, barbershops, automobile service stations and grocery stores. These non-base industries, also called local or secondary industries, are dependent on the income generated by export businesses for their survival and growth.

The long term growth or decline of a region's population is driven by the performance of the region's economy. Those regions creating increasing numbers of base jobs over the long term experience population growth. Those regions with stagnating or decreasing numbers of base jobs experience long-term population decline.

State and Regional Economic Context

Structural Changes in the State and Regional Economy

The Michigan and Detroit economies have undergone structural changes. Most recently the statewide loss of nearly 163,000 manufacturing jobs from 2000 through 2003, a decline of 18 percent has garnered much discussion. The concern is not just the affects of the current job losses but also the potential long-term risk to the State's remaining 700,000 manufacturing jobs.

In its 2002 report, *Michigan Workers in the Boom Years: Employment and Employment Earnings 1991-2000*, the University of Michigan's Institute of Labor and Industrial Relations identified five trends that were and would continue to be driving forces in Michigan's economy:

- Trend 1: Structural Labor Shortages
  Michigan will face labor shortages for the foreseeable future as there are fewer trained and skilled workers to replace retiring workers. We are leaving an era where labor markets were characterized by more workers looking for employment than there were available jobs and entering a period where—except during recessions—employers will have more jobs available than there are workers to fill them.

- Trend 2: High Pay for High Skills
  Our economy increasingly is organized around those who work with their minds more than their muscles. Machines are doing more of the heavy lifting. As we saw in the section on employment by occupation, the number of knowledge workers—those in professional, managerial, or technical occupations—is increasing rapidly. The need for more learning is not restricted to high-skilled occupations: more and more frontline work requires higher skills as workers are asked to exercise independent judgment, provide customer service, and be good problem solvers.

- Trend 3: An Abundance of Low-Wage Workers
  About one-third of all workers in a full-employment economy were in lower-wage jobs. This is in an economy where lower-skilled workers had their greatest bargaining power in decades as employers were forced to compete for entry-level workers. But even in a boom economy, many occupations continued to pay low wages and to be organized primarily around part-time work. We believe that, even with the structural labor shortages we envision for the future, a substantial portion of Michiganians will continue to work in low-wage jobs.

  This low-wage work will continue to be concentrated in retail and personal services industries: restaurants and drinking establishments; retail trade except eating and drinking; personal, repair, and building services; hotel, amusement, and motion picture services; and other services. Although they are not growing rapidly, these industries will continue to be large employers in the future. Combining the low added value of lower-skilled workers and the structure of these industries places a ceiling on how high their compensation will go no matter how tight labor markets get.

- Trend 4: An Economy Centered in Offices, Schools, and Hospitals
  The predominate trend in employment is not a shift of work from factories to stores. Rather, it is a shift from both of these workplaces to offices, schools, and hospitals. These are the places where the high-skilled work of the Information Age is done. It is where eight of the ten fastest-growing occupations are found. It appears likely that a growing proportion of employment in other industries is increasingly office-centered. In manufacturing, for example, the trend in Michigan is away from factory floor work to pre-production and post-production work done in offices by knowledge workers.

- Trend 5: Autos Still Matter
  The auto industry today and for the foreseeable future will be a critical component of the Michigan economy. We also know that if you could choose an industry to be concentrated in, auto manufacturing is still one of the best. It is one of the world's largest employers as well as one with a preponderance of high-paying jobs.

  The auto industry in Michigan is changing dramatically. The state still is a major center of motor vehicle and parts manufacturing, but increasingly its concentration is in the knowledge work of the industry: management, research and development, engineering and design, purchasing, logistics, marketing, and finance. While factory work is spreading out away from Michigan (mostly south), there is an increasing concentration of motor-vehicle-related knowledge work in Michigan. The simple fact is that there is no industry that matters as much to Michigan's economy. For the foreseeable future, Michigan's economic fortunes are substantially tied to the health of its automotive industry.

The Economy of the Future

In its 2004 follow up report, *A New Path to Prosperity? Manufacturing and Knowledge-Based Industries As Drivers of Economic Growth*, the Institute of Labor and Industrial Relations investigate which economic sectors will likely produce the greatest numbers of jobs and will likely produce the strongest economies as measured by per capita income.

The study compares manufacturing as an engine of economic growth with knowledge-based industries. These are a cluster of

industries where work is largely done in offices, schools, and hospitals. The knowledge-based industries include:

- wholesale trade
- management of companies
- information
- education
- financial activities
- health care and social assistance
- professional and technical services
- government, except education

The study offers two conclusions with relevance to the City's future economic development:

1. The evidence presented in this report strongly suggests that knowledge-based industries are playing the same role in a post-industrial economy as manufacturing did in the industrial economy. Knowledge-based industries are now the major source of employment growth, particularly of good-paying jobs. And they are the most powerful engine fueling overall economic growth. Fears that the decline of manufacturing employment will lead to a substantial decline of middle-class jobs or an overall slowdown of the economy appear to be exaggerated, if not unwarranted.
2. The evidence also suggests that Michigan's sub-par longer-term economic performance is due, in large part, to the slower growth of its knowledge-based industries compared with the nation. During the last economic cycle, Michigan lost manufacturing jobs at a slower rate than the nation, and it remains one of the leading states in share of employment earnings from manufacturing.

Implications for Rochester Hills

The structural changes to the State and regional economy suggest important implications for Rochester Hills. With Crittenton Hospital Medical Center, Oakland University, and Rochester College, the City is well positioned to take advantage of a regional economy in which jobs will be increasingly located in offices, schools, and hospitals.

To capitalize on this shift in the economy, the future land use plan should assure that there is sufficient land area planned for expansion of health care facilities and for medical offices. Expanding the types of health care available and increasing the amount services provided will not only benefit economic development goals, but will also enhance the quality of life, especially as the City's population ages. Indeed, the quality and availability of health care are important considerations of older people when making relocation decisions.

The City has already made great strides in working with Oakland University. Continued growth and expansion of the University will generally further economic development goals, although there will also be associated costs, as there are with all growth and development.

The most important move that the City has taken to join the economy of the future is the establishment of the Great Lakes Interchange®,. The mix of economic sectors targeted by the Great Lakes Interchange® are ALL knowledge-based industries. The important implication for the future land use plan is to review the Great Lakes Interchange®, district and assure that there is sufficient developable land to satisfy its goals and objectives for business recruitment and development.

Land Demand Forecasts

The following sections present forecasts of the land area needed for industrial, office, retail, and residential growth based on long-term economic and market trends.

Industrial Land Demand

The land area required for industrial uses is based on the projected employment trend for the following economic sectors: Manufacturing, Transportation and public utilities, and Wholesale trade. The first step is to project the employment in these economic sectors through 2024, using a straight-line projection based on the employment level in these sectors during the period from 1980 through 2002 (the latest year for which detailed employment data is available).

The average ratio of employment in these sectors in Rochester Hills to that in Oakland County over the past for years is then applied to the projection to determine the number of new industrial jobs for Rochester Hills. The average building space per employee for each of these sectors is applied to determine the amount of new building space required. The building space is converted to land demand by converting the building space to acres and multiplying by 4, which assumes a floor-to-area ratio of 25 percent. Because the model is employment-based, land demand refers to the land area required for new industrial buildings. The amount of land required would include existing vacant, industrially zoned land.

Table 5.5
Projected Land Demand For Industrial Land Uses, Rochester Hills, 2005 through 2024

	Oakland County Industrial Employment	New Building Space Required, Rochester Hills (sq. ft.)	New Industrial Land Area Required, Rochester Hills (acres)
Increase 2005 to 2009	22,684	655,310	5.5
Increase 2010 to 2014	22,684	655,310	5.5
Increase 2015 to 2024	51,040	1,474,447	12.5
Total 20 Year Increase	**96,408**	**2,785,066**	**23.6**

Warehousing accounts for 90.8 percent of the total projected industrial land demand. However, new warehousing facilities seek to locate near or adjacent to major freeways, and usually on the periphery of developed areas where land values tend to be lower. Based on the average value of land in Rochester Hills and the scarcity of large tracts of developable land adjacent to the freeway, it is unlikely that the City would capture any of Oakland County's projected increase in warehousing without a significant economic development intervention. Therefore, the industrial land demand forecast excludes warehousing. The final forecast for industrial land demand in Rochester Hills presented in Table 5.5 excludes warehousing.

If present trends continue, we forecast that economic and market forces will require 23.6 acres of land for new industrial

development over the next 20 years. However, the City contains less developable land in 2005 than it contained 20 years ago. As development pressures for other uses compete for scarcer and scarcer available land, the cost of land will likely rise, potentially pricing new industrial users out of the Rochester Hills real estate market.

Retail Land Demand

The land demand for retail space involves a two-step process. The first step follows the same general methodology as that used for industrial land demand and is used to provide a long-term indication of demand for retail development. The second step analyzes current consumer spending patterns to provide a more detailed analysis of the types of retail development that are needed, based on consumer spending and the growth in households.

The land demand for retail is based on employment projections for the Retail trade economic sector and for one-half of the Services sector (the remaining Services sector employment is accounted for in office space demand). The average ratio of employment in these sectors in Rochester Hills to that in Oakland County over the past four years is then applied to the projection to determine the number of new retail-based jobs for Rochester Hills. The average building space per employee for each of these sectors is applied to determine the amount of new building space required. The building space is converted to land demand by converting the building space to acres and multiplying by 4, which assumes a floor-to-area ratio of 25 percent. The projected land demand is presented in Table 5.6.

Table 5.6
Projected Land Demand for Retail Land Uses, Rochester Hills, 2005-2024

	Oakland County Retail Employment	Rochester Hills Retail Employment	New Retail Building Space Required, Rochester Hills (sq. ft.)	New Retail Land Area Required, Rochester Hills (acres)
Increase 2005 to 2009	29,000	1,497	299,309	27.5
Increase 2010 to 2014	29,000	1,497	299,309	27.5
Increase 2015 to 2024	65,250	3,367	673,445	61.8
Total 20 Year Increase	137,749	7,109	1,421,717	130.6

Source: McKenna Associates, Inc., 2004.

Long Term Retail Land Demand

The projected land demand for retail uses represents the likely demand for new retail shopping center development. An important characteristic of retail development is the need to locate in proximity to consumers. In 2000, Rochester Hills accounted for 5.6 percent of Oakland County's households, and 5.1 percent of Oakland County's retail jobs.

Considering that three of the four largest regional shopping malls in Southeast Michigan are located close to Rochester Hills (Great Lakes Crossing Mall, 1.8 million sq. ft., Lakeside Mall, 1.5 million sq. ft., and The Somerset Collection, 1.5 million sq. ft.) we conclude that Rochester Hills currently contains sufficient retail space for the number of households.

Retail Land Demand Based on Consumer Spending

The second step in determining land demand for retail development assesses consumer spending patterns. The intent

of this process is to determine the amount of retail space required to serve the needs of the residents of the City. The analysis focuses on neighborhood and community scale retail shopping centers. A certain amount of residential spending will occur in regional shopping areas outside of the City. Similarly, the City's regional scale shopping areas attract spending from residents of many other communities outside of Rochester Hills. Thus, the following analysis considers neighborhood and community scale retail shopping areas, those that lie within 3 miles of the primary customers.

Consumer Spending Patterns

Consumer spending patterns are reported annually by the federal Bureau of Labor Statistics in the Consumer Expenditures Survey (CES). For this analysis we use the most recent CES, from 2002, categorized by household income. The percentage of household income used for consumer expenditures, as reported in CES 2002, is presented in Table 5.7.

Table 5.7
Consumer Retail Spending as a Percentage of Annual Household Income,
Detroit Metropolitan Statistical Area, 2002

Retail Spending Category	Percentage of Annual Household Income
GROCERIES AND CONVENIENCE GOODS	
Food at home:	5.3
Personal care products and services:	1.1
Subtotal:	*6.4*
FOOD AND BEVERAGE	
Food away from home:	4.2
Alcoholic beverages:	0.7
Subtotal:	*5.0*
GENERAL APPAREL, FURNISHINGS AND OTHER	
Housekeeping supplies:	0.9
Household furnishings and equipment:	2.5
Apparel and services:	4.3
Entertainment - TV's, radios, stereos, pets, toys, etc.:	2.5
Reading:	0.3
Tobacco products and smoking supplies:	0.7
Miscellaneous:	1.4
Subtotal:	*12.5*
TOTAL RETAIL SPENDING:	24.0

Source: McKenna Associates, Inc., 2004, based on data contained in the Bureau of Labor Statistics Consumer Expenditure Survey, 2002.

Amount of Retail Supportable by Residents' Spending

Consumer retail spending percentages are applied to the City's median household income to determine the amount of spending by retail category. The total spending is modified to reflect general spending patterns at neighborhood and community scale retail shopping areas. Total spending is converted into the amount of retail land area that consumer spending will support. The land area analysis is provided in Table 5.8, with explanatory notes following.

The data in Table 5.8 show that retail spending by City residents in 2004 would support approximately 163 acres of retail land area at the neighborhood and community scale. By 2009, the supportable land area will increase to approximately 185 acres.

Table 5.8
Neighborhood and Community Scale Retail Land Use Area Supported by Residents' Consumer Spending, Rochester Hills, 2004 and 2009

Retail Spending Category	2004	2009
GROCERIES AND CONVENIENCE		
Total Household Expenditures ($):	151,873,146	172,378,137
Estimated Capture Rate:	75.00%	75.00%
Captured Expenditures ($):	113,904,860	129,283,602
Estimated Productivity ($/sq. ft. GLA):	387	387
Supportable Building Space (GLA sq. ft.):	294,117	333,826
FOOD AND BEVERAGE		
Total Household Expenditures ($):	117,667,852	133,554,651
Estimated Capture Rate:	50.00%	50.00%
Captured Expenditures ($):	58,833,926	66,777,326
Estimated Productivity ($/sq. ft. GLA):	250	250
Supportable Building Space (GLA sq. ft.):	235,440	267,227
GENERAL APPAREL, FURNISHINGS AND OTHER		
Total Household Expenditures ($):	296,071,321	336,045,073
Estimated Capture Rate:	50.00%	50.00%
Captured Expenditures ($):	148,035,661	168,022,537
Estimated Productivity ($/sq. ft. GLA):	219	219
Supportable Building Space (GLA sq. ft.):	676,959	768,358
TOTAL SUPPORTABLE BUILDING SPACE (GLA):	**1,206,515**	**1,369,412**
FAR:	0.2	0.2
Acreage Required:	**162.9**	**184.9**

Source: McKenna Associates, Inc., 2004.

Notes to Table 5.8.

(1) For each category of retail spending, total household expenditures is the total estimated annual spending by residents of Rochester Hills. This figure is determined by multiplying the percentage of household spending for each category from Table by the City's annual household income in 2004 as estimated by SEMCOG and the number of households estimated by SEMCOG for 2004 and 2009.

(2) Estimated capture rate is the amount of annual household expenditures that are likely captured by businesses within the City of Rochester Hills. For convenience goods (groceries and convenience) we estimate that residents likely make 75 percent of their expenditures locally. For comparison goods (all other retail categories) we assume that 50 percent of expenditures will occur at community scale shopping areas and 50 percent will be spent at regional scale shopping areas, either within the City or elsewhere.

(3) Captured expenditures is the annual spending by retail category that we estimate is spent by City residents at neighborhood and community scale retail shopping areas.

(4) Estimated productivity is the estimated spending per square foot of retail floor area. This figure is based on the Urban Land Institute's *Dollars and Cents of Shopping Centers, 2004* for Midwest shopping centers.

(5) The supportable building space is the amount of retail building space at the neighborhood and community scale that can be supported by City residents' retail spending.

(6) The Total Supportable Building Space is the sum of the supportable building space for each category of retail spending.

(7) FAR is the floor area ratio assumed for retail shopping areas. This figure indicates that 20 percent of retail zoned land will be covered by the total floor area of retail buildings. The remainder of retail sites is used for parking, landscaping, stormwater management, open space, setbacks, and signs.

(8) Acreage required is the land area needed to accommodate the total supportable building space. The calculation assumes that the typical gross leasable floor area constitutes 85 percent of the total building footprint area for retail buildings. This figure is obtained by dividing the total supportable retail building area by the FAR.

Excess Retail Land Use
The existing land use analysis found that neighborhood and community scale land use occupied 253 acres of land, substantially more than the 163 supported by City residents' consumer spending. There are two basic explanations for the excess retail land area:

1. City businesses capture a greater percentage of resident's retail spending that is assumed in Table .
2. The trade area for some of the City's retail shopping areas extends into adjacent communities and local businesses capture spending from residents of these adjacent communities.

Based on the analysis of consumer spending no additional retail development is currently required to serve the neighborhood and community scale retail shopping needs of the City's residents as a whole. If present household growth trends continue, no additional retail development would be needed to serve the neighborhood and community scale retail shopping needs of the City's resident through 2009.

However, based on the first analysis, maintaining the current level of retail development relative to the City's economy would require an additional 27.5 acres of new retail development over the next five years, and a total of 130.6 acres over the next 20 years.

Objectives for Future Retail Development
To fully understand the dynamics of the City's retail shopping areas, a more detailed market analysis of the trade area for each shopping area may be required. Based on consumer spending patterns, no new retail development is needed over the next five years. However, to maintain the current level of retail development, an additional 27.5 acres of new retail development will be needed. The future land use plan should address this discrepancy.

Office Land Demand

As discussed previously, Rochester Hills is well positioned to capitalize on the economy of the future. As the state and regional economies continue to transform structurally, the base industries in the economy will continue to shift from the factory to the office building. These businesses are the ones that will bring new dollars into the local economy.

This section considers the prospects for office development, larger offices, typically with 10,000 sq. ft. or more of floor area. The office market in the Detroit metropolitan area is divided into several sub-market areas:

- Ann Arbor
- Birmingham/Bloomfield
- Dearborn
- Detroit
- Farmington
- W. Bloomfield
- I-275 Corridor
- I-75 North Corridor
- Southfield/Bingham Farms

Of particular interest to this analysis is the I-75 North Corridor, which includes Troy, Auburn Hills, and Rochester Hills. These three cities contained 15,971,072 sq. ft. of office space,

accounting for about 19.8 percent of the total office space in the Detroit metropolitan area in 2004, according to Signature Associates' *2004 Mid-Year Market Report*. The City of Troy accounted for most of the office space in this sub-market. However, the availability of developable land suggests that demand for future office development in the sub-market will increasingly move towards Auburn Hills and Rochester Hills.

The forecast of land needed for future office development is based on the projected office development for Oakland County and the sub-market's and the City's portions of the County's past office development. The projected office development for Oakland County is derived as a straight-line projection of office development in Oakland County from 1992 through 2003, as reported by SEMCOG. The projected office space in the I-75 North sub-market and in Rochester Hills are based on each of these area's portion of the County's total office development in 2001, 2002, and 2003. The projections are provided in. Table 5.9.

If present office development trends continue, the City of Rochester Hills will experience 1.37 million square feet of new office development over the next five years, and 8.52 million square feet over the next 20 years.

Table 5.9
Projected New Office Development (sq. ft.), Oakland County, I-75 North Sub-Market and Rochester Hills, 2005 to 2024

Year	Oakland County	North Sub-Market	Rochester Hills
2005	2,438,647	1,154,214	243,999
2006	2,589,356	1,225,545	259,078
2007	2,740,066	1,296,876	274,158
2008	2,890,776	1,368,207	289,237
2009	3,041,486	1,439,538	304,316
2010	3,192,196	1,510,869	319,396
2011	3,342,906	1,582,200	334,475
2012	3,493,615	1,653,531	349,554
2013	3,644,325	1,724,862	364,634
2014	3,795,035	1,796,193	379,713
2015	3,945,745	1,867,525	394,792
2016	4,096,455	1,938,856	409,871
2017	4,247,165	2,010,187	424,951
2018	4,397,875	2,081,518	440,030
2019	4,548,584	2,152,849	455,109
2020	4,699,294	2,224,180	470,189
2021	4,850,004	2,295,511	485,268
2022	5,000,714	2,366,842	500,347
2023	5,151,424	2,438,173	515,426
2024	5,302,134	2,509,504	530,506

Source: McKenna Associates, Inc., 2004.

However, it is likely that market demand will shift some office demand from the City of Troy to the cities of Auburn Hills and Rochester Hills. Furthermore, the City may make a concerted effort to attract additional office development because offices represent the work place of the future economy and because offices tend to provide more revenues at less service costs than other types of development. New efforts to attract office development and office-based employment The forecast for future office development in Rochester Hills assumes that the current capture rate of 21.1 percent of the I-75 sub-market's new office development is increased to 31.7 percent. The forecast for future office development is presented in Table 5.10.

Table 5.10
Office Land Demand Forecast,
Rochester Hills, 2005 through 2024

Time Period	New Office Development (sq. ft.)	FAR	Land Area Required (acres)
2005 to 2009	2,056,183	1.0	47.2
2010 to 2014	2,621,657	1.0	60.2
2015 to 2024	6,939,734	1.0	159.3
Total 20 Year Increase	**11,617,574**	**1.0**	**266.7**

Source: McKenna Associates, Inc., 2004.

Residential Land Demand

The residential land demand analysis is based on projecting the City's past growth in households into the future, assuming that the ratio of single-family detached, to duplexes, to townhouses and attached condos, to multiple-family dwellings over the past ten years remains constant. The resulting projection is provided in Table 5.11.

Table 5.11
Projected Growth in Housing by Type,
Rochester Hills, 2005 through 2024

Time Period	Households	Single Family	Duplexes	TAC	Multiple-Family Units
2005 to 2009	2,511	1,975	13	25	497
2010 to 2014	2,511	1,975	13	25	497
2015 to 2024	5,649	4,445	29	56	1,119
Total 20 Year Increase	11,926	9,383	62	119	2,362

Source: McKenna Associates, Inc., 2004.

The data in Table 8 show that, if trends established over the past 20 years continue, the market will demand 11,926 new housing units in Rochester Hills between 2005 and 2024. Multiplying the number of units by the typical density determines the projected land area required to accommodate new housing units. This information is presented in Table 5.12.

Table 5.12
Projected Land Demand for Residential Uses,
Rochester Hills, 2005 through 2024

Time Period	Single Family	Duplexes	TAC	Multiple-Family Units	Total
2005 to 2009	1,006	14	4	52	1,076
2010 to 2014	1,006	14	4	52	1,076
2015 to 2024	2,263	32	9	117	2,421
Total 20 Year Increase	4,778	68	19	246	5,110

Source: McKenna Associates, Inc., 2004.

Table 5.12 indicates that if present trends continue, economic and market forces will need 4,572 acres of land for new residential development over the next 20 years.

Summary of Land Demand

According to SEMCOG, the City of Rochester Hills increased from 68.0 percent developed to 77.1 percent developed during the period from 1990 to 2000, converting nearly 2000 acres from undeveloped to developed. If past trends continue the City will continue to develop at about the same rate. The projected land demand based on past trends is presented in Table 5.13.

If the City continues along the current development path, almost 5,000 acres of land would be developed over the next 20 years. According to SEMCOG, the City had only 4,813 acres of undeveloped land in 2000. Thus, past development patterns are not sustainable over the next 20 years.

Table 5.13
Land Demand Forecast, by Land Use Type (In Acres), Rochester Hills, 2005 through 2024

Time Period	Industrial	Retail	Office	Residential	TOTAL
2005 to 2009	5.5	27.5	47.2	1,075.9	1,156.1
2010 to 2014	5.5	27.5	60.2	1,075.9	1,169.1
2015 to 2024	12.5	61.8	159.3	2,420.8	2,654.4
Total 20 Year Increase	**23.6**	**130.6**	**266.7**	**4,572.6**	**4,979.6**

Source: McKenna Associates, Inc., 2004.

Conclusions

The City will run out of land for development if present development patterns continue. Clearly, the City should begin planning to change the basic development policies with a goal of sustainability.

Industrial Development

Industrial land uses make up less than 1 percent of the projected acreage of new development. However, most industrial development will likely be priced out of the City's real estate market over the long term, as scarcity of developable land drives land prices higher. The City should consider reducing or eliminating areas of new industrial development. Policies should be adopted to assist existing industrial businesses and to maintain the integrity of existing industrial parks. At the same time, the City should be prepared for the market to price industrial users out of the City. Future planning should include redevelopment of existing industrial areas.

Retail Development

The City currently provides retail businesses beyond that necessary for the neighborhood and community scale shopping needs of City residents. However, additional retail development is required as the City continues to grow, if retailing is to maintain its present proportions.

The following retail objectives should be evaluated:

1. Each neighborhood area should have convenience goods and services available at a convenience or neighborhood scale retail shopping areas within approximately a 1½ mile distance.

2. Each neighborhood area should have comparison goods and services available at a community scale retail shopping area within a 3 to 5 mile distance.
3. Neighborhood and community scale retail shopping areas should primarily serve a Rochester Hills trade area, but trade areas may extend into adjacent communities only when there is adequate road capacity.
4. Regional scale retail shopping areas should be located only in close proximity the freeway access.

Office Development

Office work represents the economy of the future. Pursuing the this office based economy can have several benefits:

1. Planning and pursuing the economy of the future will assure that the City's economy, and the area economy have a sufficient foundation of base industry to remain sustainable.
2. Maintaining the City's position in the regional economy will support and promote the property values of the City's housing, which will remain close to the jobs of the future.
3. Offices generate higher property tax revenues and lower service provision costs. Promoting office development will improve the fiscal sustainability of new development overall.
4. The City is located in one of the region's active office sub-markets. Attracting an increased portion of new office development as an economic development policy is viable and realistic.

To realize the benefits of office development, the City should pursue an economic development objective to attract new office developments and new office users, with a goal of capturing 30 percent of the I-75 North office sub-market's new office construction.

Residential Development

If present trends continue, residential development will continue to eat up the majority of undeveloped land in the City. Over the next 20 years, residential development would require more land than there is existing undeveloped land in the City. The current residential land development pattern is unsustainable.

If the City is to continue to grow in population and housing, higher density, more compact forms of development will be required. The existing trend in the region is an increasing development of townhouses and attached condos, which currently constitute less than 1 percent of the City's new housing. To promote sustainable development, the City should encourage townhouses and attached condos.

SWOT Analysis

Introduction

Businesses, organizations, and communities use strength, weaknesses, opportunities, and threats (SWOT) analyses to assess their operations and capabilities, and the environment in which they function. They then develop strategic action plans based on the SWOT analysis.

This SWOT analysis is included in this chapter as a tool for developing the ultimate economic development strategy. The following is a brief description of SWOT analysis, and a brief explanation of the economic development strategy.

SWOT Analysis

A SWOT analysis is a subjective analytical tool that helps a community understand where it is today, and where it could be tomorrow. Such an understanding makes possible effective strategic planning whereby a community plans and implements the actions and projects required to realize the community's goals.

SWOT analysis identifies a community's real and perceived, internal and external, positive and negative capabilities and attributes relative to the community's vision and goals. Table 5.14 depicts the analytical structure used for SWOT analyses.

Table 5.14
SWOT Analysis Structure

	Positive:	Negative:
Internal:	STRENGTHS	WEAKNESSES
External:	OPPORTUNITIES	THREATS

Strengths and weaknesses are internal to the community. They are both real and perceived characteristics that could affect the community's ability to realize its vision and goals. Opportunities and threats are conditions in the region and environment in which the community exists and operates. They represent conditions that might affect the community's ability to realize its vision and goals.

Strengths and opportunities are those real and perceived capabilities and attributes that will likely increase the community's ability to achieve its goals. Weaknesses and threats are those real and perceived attributes that might decrease the community's ability to achieve its goals.

Economic Development Strategy

As the description of the analytical structure makes clear, a SWOT analysis is prepared relative to an organization's goals. The City of Rochester Hills has prepared the SWOT analysis as a tool in developing the economic development strategy, which is presented in a subsequent chapter. The City's economic development goals are discussed in more detail in that chapter.

Economic Development Goals

For the present purposes, one should understand the reasons that communities undertake an economic development program. Local economic development goals may be grouped as follows:

- **Job Creation**. Job creation is often a primary goal, based on the perceived link between job creation and the overall health of the local economy. Job creations include not only creating more jobs, but also creating better jobs. Jobs created should support a desired

standard of living, offer stability and decent work conditions and provide opportunity for advancement. New jobs in basic sector businesses increase buying power support for businesses in the local economy.

- **Job Retention**. Job retention objectives are intended to retain existing businesses. Job retention is a goal because the loss of a job in a local economy means the loss of the economic advantages resulting from that position.

- **Tax Base Enhancement**. Tax base enhancement is an economic development goal because most local governments raise the majority of their revenue through local property taxes. New revenues generated by new economic activity can fund public service improvements and reduce demand for tax rate increases.

- **Quality of Life**. The final common objective of economic development is to enhance the quality of life in the local community. Quality of life means different things in different communities, but generally include safety and security, education, poverty reduction, environmental quality, and recreation and culture.

While the City has interest in all of these goals, the primary goal motivating the City to invest in economic development is to expand and diversify the tax base in order to assure the City's long-term fiscal vitality.

Economic Base Theory

Most economic development strategies rely, at least in part, on economic base theory. Economic base theory holds that an economy's health depends on the vitality of its export industries, also know as base industries or primary industries. These firms sell or "export" their products and services outside the community and bring new dollars into the community, increasing the total dollars that circulate within the community and that are spent on non-base industries. Non-base industries serve the local market, such as movie theatres, barbershops, automobile service stations and grocery stores. These non-base industries, also called local or secondary industries, are dependent on the income generated by export businesses for their survival and growth.

Incorporating economic base theory into local economic development suggests that limited local economic development funds and resources should be directed at those economic sectors that bring new dollars into the local economy. Thus, the SWOT analysis focuses on the needs and perceptions of basic sector businesses and Rochester Hills as a place for the businesses to be located.

STRENGTHS

- ***Proximity to Daimler-Chrysler***
  Proximity and ease of access to Daimler-Chrysler (DCX)'s headquarters and technical center in Auburn Hills is an advantage to a Rochester Hills business location. Interviews with real estate brokers and developers suggest that many businesses, especially manufacturers who supply parts and equipment to the automakers and those firms who supply the parts and equipment manufacturers, are willing to pay a premium for a business location near DCX.

  Rochester Hills is not the only possible location for such premium-paying firms, but locations with freeway visibility and access (discussed below) and available land for build-to-suit corporate clients *is* limited. The City's economic development strategy can cultivate this niche market to increase its appeal and to continue to draw premium-paying businesses.

  Some firms may view proximity to DCX as a liability. With diversification in the auto industry many firms that previously supplied to only one of the big-three auto makers now try to distance themselves – in the market place and physically – from any single manufacturer. This distancing tendency makes south Oakland County locations tough competition to Rochester Hills for many business expansions.

- ***Undeveloped Land on M-59***
  Many corporations are willing to pay a premium for an office location that provides a quality environment in which to advertise their corporate-brand identity, especially along a highly visible, heavily traveled freeway corridor. A strength upon which to build the City's economic development program is the potential development and redevelopment of land along M-59.

  Capitalizing on this strength requires implementation of certain road projects, such as an extension of Austin Road. Visibility from the freeway is important, but an office location also requires easy access to that freeway (see below).

  Maintaining the premium value of M-59-visible land for corporate and office development necessitates the City manage growth and development in the corridor. The City should prevent the corridor's visual degradation by other types of development that might detract from quality environment favored for marketing corporate-brand identities.

- ***Freeway Access***
  Easy access to a freeway connects a business location to customers, suppliers, and employees throughout the Southeast Michigan region. The closer a business is to the freeway, the closer it is to customers and suppliers, with the potential to reduce costs.

  The closer a business is to the freeway, the closer it is to the region's labor force. As the baby boom generation retires, the economy (locally, regionally, and nationally) will face an increasingly tighter labor market, with fewer available workers. Proximity to the labor force will become increasingly important to businesses.

Maintaining the advantage of freeway access requires the City to manage growth and development at interchanges and along local roads connecting businesses areas to the interchanges. Access management should be a priority consideration. The impact of land use on traffic flow requires that land use designations also be a primary consideration.

- ***Great Lakes Interchange®***
  Michigan's Great Lakes Interchanges® are collaborations between universities, industry, research organizations, government, and other community institutions intended to stimulate the growth of technology-based businesses and jobs by aiding in the creation of recognized clusters of new and emerging businesses, those primarily focused on commercializing ideas, patents, and other opportunities surrounding corporate, university or private research institutes and development efforts.

  The Great Lakes Interchange Great Lakes Interchange® crosses city borders and encompasses part of the area of Southeast Michigan dubbed "Automation Alley" because of the technology manufacturing located there. Automation Alley is a branding mechanism adopted by a 500+ company consortium to organize and coordinate products and services as a single brand entity in the global marketplace. Automation Alley provides a variety of services and benefits to member companies and organizations.

  The Great Lakes Interchange Great Lakes Interchange's® focus is business and technology in advanced automotive, information technology, bio-medical and homeland security sectors. The Great Lakes Interchange® is a collaboration of Automation Alley, the City of Southfield, City of Troy, City of Rochester Hills, Oakland University, Lawrence Technological University, and Oakland County.

  Describing the range of services, assistance, and benefits available to companies located in the Great Lakes Interchange® is beyond the scope of this analysis. However, the State has only approved 11 Great Lakes Interchanges®, and the available benefits will enhance the City's ability to attract new businesses and help existing businesses expand.

- ***Professional Economic Development Staff***
  The City has hired a professional economic developer. Having a professional dedicated to economic development and dedicated resources elevates the City's program and enhances its efforts.

  All of the incentives available through the City, the Great Lakes Interchange®, and others, are pointless without staff to assist developers and businesses to use them. The City has invested resources in recognition of the need for economic development.

  More importantly, businesses expect a degree of confidentiality when investigating sites for new and expanded facilities. These businesses often have a level of trust with an economic developer, whom they perceive as potentially able to expedite processes.

- ***Positive Community Image***
  Among the various developers, brokers, and businesses interviewed during the preparation of this analysis, Rochester Hills was noted for having a very favorable community image.

Community image rarely motivates a business location decision, but it does enter into the decision. A business opening a new location often relocates some existing personnel to manage and operate the new facility. Such relocations are eased when personnel are attracted to the new community. Likewise, community image does affect the ability of existing companies to retain good employees and to attract new employees.

WEAKNESSES

- ***Perception that City Government is Difficult on Businesses***
  Rochester Hills is perceived by developers as one of the most difficult communities in which to develop. This perception could potentially hamper the City's economic development program. Developers are a necessary partner in developing and redeveloping property for new businesses in the City. The perception of a difficult development process adds to the cost of development, which ultimately adds to the cost of a Rochester Hills business location. The perception might also steer some developers away from the City.

  Interviewed commercial/industrial brokers stated that some businesses perceive some of the City's services to be unfriendly and difficult. Businesses considering a new location typically talk to existing businesses to learn more about the location and the community. Negative perceptions by the City's existing businesses might hinder business attraction efforts.

  Some of those interviewed stated their thought that having a professional city manager with a directive to fix processes and improve efficiencies could enhance business perceptions of city government.

- ***Local Traffic Congestion***
  The strengths section identified Rochester Hill's positive community image as an advantage. However, getting caught in local traffic congestion can easily tarnish that image for businesses visiting a potential new location. Local traffic

can also increase the cost of doing business for existing firms in the City. As discussed below, businesses in the M-59 corridor do not have nearby services and shops, and local traffic congestion makes accesses the City's existing commercial areas time-consuming.

- ***Lack of Convenient Business Services***
  Businesses today recognize the need to have convenient access to business services and shops, restaurants, and even gyms and recreational facilities for employees. The M-59 corridor is not conveniently located to the City's main shopping corridors. Overcoming this weakness will enhance the City's attractiveness for corporate offices.

- ***Not a Distinguished Location for Many Businesses***
  Businesses seeking to locate close to DCX and businesses seeking a location with freeway visibility may be willing to pay a premium to be in Rochester Hills. For most other businesses, Rochester Hills is not distinguishable from Troy, Auburn Hills, Orion Township (Oakland County), or even Madison Heights.

  For these other businesses, Rochester Hills competes with many other communities. Conditions in these other communities affect Rochester Hills' economic development efforts. For example, the current high office-vacancy rates in Troy put downward pressure on office rents in Rochester Hills.

- ***Lack of Parking***
  Many industrial buildings in the City are being converted from strictly industrial uses, to flex space (office/industrial combination) and offices. The conversion is an effect of the transformation of the regional economy and the evolution of business operation and production processes.

  These new uses tend to have more employees per square foot than the former uses. The result is a lack of adequate parking. Individual businesses tend to be unable to fully address parking needs; cooperative efforts and public intervention might be warranted.

- ***Lack of Public Relations***
  The interviews conducted for this analysis and the public workshops made clear that the City faces real public-perception problems. The City has not clearly communicated its successes and the rationale for difficult decisions.

  Rochester Hills does not currently employ a public relations specialist. Such a position could help the City formulate and communicate its message. The issues is not simply "PR", but is a real need to assure that citizens can fully understand what their local government is doing (and why), and to counter negative perceptions among developers, businesses, and residents.

OPPORTUNITIES

- ***Changes in Economic Structure***
  As discussed in the Market Analysis chapter, the structure of the regional and state economy is changing. The jobs of the future will increasingly be located in offices, hospitals and schools. From 1990 through 2003, knowledge-based jobs in Michigan increased by 273,800 jobs, which is more than the increase in manufacturing jobs (-103,800 jobs), and low-skill service jobs (216,900).

  With Oakland University, Rochester College, Crittenden Hospital, Beaumont Hospital, and the M-59 corridor, Rochester Hills stands to benefit from this economic change. The City has an opportunity to diversify its local economy – and consequently its local tax base – by capturing these jobs.

  The changes in economic structure suggests that there will be continuing and expanding demand for office space, and new office locations (see also the discussion of Michigan's economy in the threats section below).

- ***Internationalization of Auto Industry***
  While the Big Three lose market share, more and more foreign automakers are increasing their presence in Southeast Michigan. These foreign manufacturers will likely want to establish a corporate location to advertise their corporate-brand identity. International automakers and suppliers represent a new and growing market for office and industrial space.

- ***County and State Economic Development Support***
  State and County economic development priorities correlate well with many of Rochester Hills' strengths. Having similar goals will allow the City to effectively piggy-back on County and State business attraction efforts.

- ***Downtown Rochester Offers Sense of Place***
  The City of Rochester has invested to redevelop its traditional downtown. The downtown establishes a sense of place and adds to Rochester Hills' overall community image. Many competing locations do not have a traditional downtown. Increasing the ties (physical, political, and economic) between Rochester and Rochester Hills offers an opportunity to differentiate the two cities from others as places to do business.

THREATS

- ***Michigan's Economy***
  Michigan's economic structure has been undergoing a long-term restructuring, with manufacturing becoming less and less important. In the recent recession, from 2000 through 2003, manufacturing jobs in Michigan decreased by 18.2 percent. As discussed above, Michigan saw an overall increase in jobs and in knowledge-based sector jobs from 1990 through 2003.

  The performance of the state's economy in the past suggests that the economy will continue to add knowledge-based jobs to replace the loss of manufacturing jobs. The threat lies in the real possibility that the economy will become less able to make-up for permanently lost manufacturing jobs.

- ***Changes at DaimlerChrysler***
  Daimler-Chrysler is unique auto manufacturer. Although the company's Chrysler division is headquartered in Auburn Hills, the corporation is headquartered in Germany. Employment and operations at the firm's Auburn Hills' facility are subject to change, possibly to a greater degree than is true of Ford's and General Motor's headquarters.

  Because proximity to DCX is the primary factor generating a premium for office locations in Rochester Hills, any changes to employment and operations, positive or negative, could have a corresponding affect on the Rochester Hills real estate market.

- ***Demand for Retail Development***
  Rochester Hills faces continued development demand for retail development. As discussed elsewhere in this plan, there is a limited amount of undeveloped land planned and zoned for retail use. The threat is that this demand could overpower the City's plans and efforts to see the M-59 corridor developed as a premium, corporate-office corridor.

  The City includes vacant land that is planned and zoned for retail development. The Master Plan should steer new retail development to those areas and maintain the M-59 to satisfy long-term demand for prime corporate office locations.

- ***Vacancies in Troy***
  The Troy office market has recently experienced substantial vacancies, GM's transfer of much of its employment to the redeveloped technical center in Warren, and the contraction of other firms concentrating reduced workforces have taken their toll. Several brokers suggested that the uptake of vacant space in Troy will be lengthy, perhaps taking three to five years.

  Vacancies in Troy affect the real estate market in Rochester Hills. Developers are unlikely to undertake speculative office development in the I-75 north office sub market as long as vacancy rates depress the rents the market will support. Even the build-to-suit office market will be affected. Businesses wishing to establish a corporate presence typically want build-to-suit office space rather than taking existing buildings, but as long as rents remain low for existing office space corporate agents will have to seriously weigh the cost implications.

Economic Development Goals and Objectives

This section begins with an introductory "Purpose" section that explains the rationale for the strategy. The remainder of the chapter establishes five economic development goals, with specific objectives for each goal.

Purpose

As discussed in the SWOT Analysis, three basic goals motivate communities to implement programs to develop and expand local economic activity:

1. Tax base enhancement
2. Quality of life
3. Job creation and retention

Tax Base Enhancement

The Tax Base Analysis section of this chapter illustrated that the City's tax base relies relatively highly on residential property. That chapter also illustrated that the City's current revenue and expenditures patterns are not sustainable beyond 2012.

To address this impending fiscal problem, the City wants to alter the tax base structure to be less reliant on residential property. Numerous fiscal impact studies have found that industrial and office properties require less costs in municipal services than they provide in property tax revenues. Contrarily, residential properties require more costs in municipal services than they provide in tax revenues.

The City has determined enhancing the tax base structure to be the most important among the three basic goals. By maintaining the fiscal health of the city by enhancing the local tax base, the City will be able to maintain the high quality of life and above average job creation and retention found in the City. Enhancing the tax base structure guides the economic development goals and objectives presented beginning on the next page.

Quality of Life

Improving a community's quality of life is a second basic goal for local economic development. Quality of life means different things in different communities, but generally include safety and security, education, poverty reduction, environmental quality, and recreation and culture.

Community opinions expressed in the public workshops and the online survey indicated that residents were generally satisfied with the quality of life in Rochester Hills. Maintaining the fiscal resources necessary to continue and improve the City's quality of life is second only to enhancing the tax base structure as an economic development goal.

Job Creation and Retention

For 2004, Rochester Hills' average monthly unemployment rate, 4.1 percent, was less than the rate for Oakland County, 5.3 percent, and Michigan, 7.1 percent. The City similarly experienced lower unemployment in the first three months of 2005. The average monthly unemployment rate equates to about 1,200 to 1,500 City residents out-of-work but currently looking for work in any given month.

Creating jobs for the City's unemployed residents is a component of Rochester Hills' economic development strategy. The City's unemployment rate is, however, relatively less

problematic than is the rate for the County and the State. Job creation and retention is currently least important among the three basic goals for the City of Rochester Hills.

GOALS and OBJECTIVES

The following goals and objectives have been formulated to enhance the City's tax base in order to maintain and improve the quality of life, and to increase employment opportunities for the City's residents.

Goal #1
Develop M-59 as a Premier Office Location

The purpose of this goal is to plan for and facilitate the development of the M-59 corridor, along its undeveloped and underdeveloped portions, as a premier location for corporate offices.

Objective 1.1: Create Regional Office Corridor
The Future Land Use Plan should identify a regional office corridor along undeveloped and underdeveloped portions of the M-59 corridor, generally from the boundary with Auburn Hills to the Crooks Road interchange. The City should adopt planning and land use policies and regulations to preserve the regional office corridor for office uses only. Land use policies should protect the viewshed of M-59 from uses and structures that might detract from the attractiveness of the regional office corridor to corporate offices. Land use regulations should require the high quality development and aesthetic standards.

Objective 1.2: Establish a Corporate Office Business Attraction Program
The City should establish and implement a program to attract corporate offices to the M-59 regional office corridor, focusing on expanding Southeast Michigan corporations and global

corporations looking for a business presence in Southeast Michigan.

Objective 1.3: Develop Parking Structures to Promote Office Development
The City should utilize LDFA financing to construct parking garages in the regional employment area when such structures will facilitate increased density, larger investment, and greater tax returns.

Objective 1.4: Provide Access Roads
The City should construct roads in the regional office corridor to provide access to the entire M-59 viewshed. Extending Austin west to Bond will increase development potential in the regional office corridor.

Goal #2
Maintain and Further Develop the M-59 Regional Employment Area

The purpose of this goal is to maintain and further develop the regional employment area between Hamlin and Auburn roads from the City's boundary with Auburn Hills to the area east of the Crooks Road interchange. The intent is to promote new investments in this area, to facilitate increased employment at existing buildings, and to guide the expansion into adjacent Potential Intensity Change Areas.

Objective 2.1: Define and Plan for the M-59 Regional Employment Area
The Future Land Use Map should identify the M-59 regional employment area surrounding the regional office corridor. The City should adopt planning and land use policies and regulations to permit office, research and technology, and light manufacturing. Regulations should also permit support services, including fitness centers, restaurants, postal and shipping services, and banks, but other retail uses should be prohibited.

Objective 2.2: Market the Regional Employment Area
The City should establish and implement a marketing strategy to market the M-59 regional employment area to developers, real estate brokers, and new and expanding regional businesses.

Objective 2.3: Develop Interior Road Network
The City should construct an interior road network within the M-59 regional employment area to promote interior circulation within the area, to improve access to the Adams and Crooks roads interchanges, and to reduce traffic on Hamlin and Auburn roads.

Objective 2.4: Reduce Traffic Congestion
The City should construct a boulevard on Crooks Road from Auburn to Hamlin and establish an access management plan for the reconstructed roadway. The City should also establish an access management plan for Adams Road from Auburn to Hamlin.

Goal #3
Differentiate the M-59 Regional Employment Area as a Business Location

The purpose of this goal is to establish and implement programs and projects that will differentiate the M-59 regional employment area as a business location.

Objective 3.1: Market Great Lakes Interchange® Benefits and Incentives
Numerous incentives and benefits are available through the Great Lakes Interchange Great Lakes Interchange®, differentiating a Great Lakes Interchange® business location from most other business locations in Michigan. The Great Lakes Interchange® should figure prominently in the City's economic development marketing efforts.

Objective 3.2: Develop a Brand Identity for Rochester Hills
The City should develop a single brand identity for economic development efforts. As stated above, the Great Lakes Interchange® should figure prominently in the brand identity. To help differentiate Rochester Hills as a business location, the brand identity should also incorporate the proximity or association with Downtown Rochester.

The brand identity should include, at a minimum, a tag line, a core marketing message, and unifying graphics.

The brand identity will be focused on the Great Lakes Interchange® and attraction efforts for targeted businesses. It will, however, serve for marketing to corporate offices (see objective 1.2) and for marketing Rochester Hills generally as a business location (see objective 3.3).

Objective 3.3: Develop and Implement a Marketing Plan
The City should prepare and implement a marketing strategy to attract new businesses to the Great Lakes Interchange® particularly and to the City in general. The marketing plan should establish clear and measurable marketing goals and objectives. The marketing plan should identify the target audiences, which should most likely be the business sectors target by the Great Lakes Interchange Great Lakes Interchange®. The marketing plan should identify specific public relations strategies, advertising strategies, trade show strategies, website strategies, and other strategies. Finally, the marketing plan should establish an evaluation process to measure the success and efficacy of the marketing program.

Objective 3.4: Establish a BRE Visitation Program
In communities with well-established economic development programs in the US, the majority of new jobs are created through expansion of existing businesses (as opposed to the more publicized attraction of new businesses). Thus, resources are dedicated to Business Retention and Expansion (BRE) activities. One of the most common BRE activities is to have economic development staff or volunteers visit existing businesses.

A business visitation program is used to survey existing business to gauge the business climate, learn of potential expansions (or reductions), and to identify business assistance needs. When conducted by volunteers, visitation programs can be an effective means to measure existing-business opinions on public economic development services and other public services.

The Michigan Economic Development Corporation conducts an annual visitation program with large employers. The City's visitation program should be coordinated with the State's program for Rochester Hills businesses.

Objective 3.5: Improve Communications with Businesses
As discussed in the SWOT Analysis, some businesses have a negative perception of the City government. To combat negative perceptions the City should improve communications

with local businesses. One method is to distribute a regular newsletter to area businesses keeping them informed of improvements in public services. Another method is to sponsor regular monthly breakfast roundtables with elected officials and different sectors of the business community. Informal breakfast roundtables foster two-way communication and they reinforce a message that elected officials value the local business community.

Goal #4
Use Other Economic Development Tools to Enhance the Tax Base

The purpose of this goal is to use all available economic development tools to promote the community's economic development and to enhance the City's tax base.

Objective 4.1: Promote Brownfield Redevelopment
The existing land use map identifies several landfills and other contaminated sites in Rochester Hills. The City should plan for the desired use of these contaminated sites, and then vigorously pursue brownfield redevelopment. As a first step, the City should pursue grant and other financing to conduct preliminary environmental assessments to determine the potential clean-up and redevelopment costs.

Objective 4.2: Promote Workforce Development
During the tight labor market of the late 1990s, proximity to available labor force was the most important factor influencing the location decision of expanding businesses. Over the next 20 years, as the baby-boom generation retires from the labor force, workforce issues will once again become a force driving location decisions.

The City should continue to work with and promote communication between workforce training providers, workforce funding agencies, and local employers. The City should facilitate unique and user-specific training programs to the degree possible. Answering existing business needs for workforce training is a service that can differentiate a Rochester Hills business location.

Objective 4.3: Coordinate Economic Development Efforts with County and State Programs
The types of businesses targeted by the Great Lakes Interchange Great Lakes Interchange® are some of the businesses targeted by Oakland County's and Michigan's economic development programs. This overlap makes it possible for the City to coordinate with and piggy-back on these existing programs.

Objective 4.4: Use Tax Abatements Judiciously
Tax abatements are an important component of economic development efforts throughout the State of Michigan. Under this economic development strategy, however, the primary motivating factor for investing resources in economic development is to enhance the tax base. Tax abatements typically result in some increase in tax revenues resulting from new development. In future considerations of tax abatements, the City should consider not only whether there is some increase in tax revenues, but whether the increase is greater than the increased tax that would be generated by an alternative form of development (i.e. retail).

Goal #5
Facilitate Medical Office Development to Serve an Aging Population

The purpose of this goal is to facilitate the development of new and expanded medical offices to serve the needs of an aging population. Although medical offices are not basic-sector businesses, they do have a beneficial fiscal impact and are therefore an appropriate focus for the City's economic development strategy.

Objective 5.1: Plan Adequate Areas for Medical Offices
The Future Land Use Plan should plan sufficient land area to accommodate the future, long-term demand for medical offices. To the degree feasible, such areas should be located in proximity to Crittenden and Beaumont hospitals, creating clusters.

Objective 5.2: Assess Zoning Requirements for Medical Offices
The City should assess the current zoning requirements for medical offices to assure that undue restrictions are not mandated and to assure that the City is facilitating medical office development while protecting the community's health, safety, and welfare.

6. Community Vision, Goals and Objectives

During the planning process, a series of public input initiatives were conducted to ensure that the Master Land Use Plan reflected the vision of City representatives, residents, and business leaders. These initiatives included an online public forum and public input workshops for the business community and the residents of the City. These public input initiatives indicated that residents and business owners are proud of Rochester Hills and the high quality of life found in the City.

Factors that were identified by residents as contributing to the high quality of life in the City include the prevalence of natural features such as the river, open spaces and trees; the attractive appearance of the City; proximity to cultural, medical and educational facilities; good schools; the variety of available single-family housing types; and the outstanding recreational areas and facilities available.

The public input sessions also identified characteristics, and development types or trends within the community that should be encouraged or discouraged.

COMMUNITY VISION

The purpose of the Master Land Use Plan is to guide the City in future land use decisions. The results of the Existing Conditions Analysis in Chapter 3 and of the community visioning meetings have been utilized to create the following vision statements. These statements encompass the City's values and desires.

- To improve all aspects of the physical environment of the City.
- To promote the general health, safety, and welfare of city residents by making the city more self-sustaining, functional, attractive, and supportive of the residential, business and civic activities that together comprise Rochester Hills.
- To promote the public interest or the interest of the community at large, rather than the interests of individuals or special groups within the community.
- To facilitate the democratic determination and implementation of community policies governing physical development. The plan is based on the City's recognition of the City Planning Commission as responsible for determining land use policies, with the opportunity for public and City Council participation during the planning process and prior to the adoption of the plan.
- To effect political and technical coordination in community development policies.
- To bring professional and technical knowledge to bear on the making of political decisions concerning the physical development of the community.
- To provide a set of land use goals based on long-range considerations to guide the making of shorter-range

objectives affecting the physical development of the community.

- To provide an understanding of the community's overall long-range growth pattern and goals which incorporate economic, physical, and social considerations.

- To recognize Rochester Hills is an essentially built-out community, which needs to focus its land use decisions on optimizing remaining development and redevelopment while recognizing opportunities for improvement of existing conditions within the City.

- To recognize Rochester Hills has a relationship with Oakland County and the region. There is a need to coordinate land use, infrastructure, transportation and natural features policies with these communities where impacts extend beyond the City's corporate boundaries.

GOALS AND OBJECTIVES

The preceding vision statements set the overall policy for land use decisions in the City. Based upon these vision statements, the following goals and objectives were created. These terms are defined as follows:

- Goals are broad descriptions based on community desires for the future. Goals are long term ends toward which programs or activities are directed.

- Objectives are specific and measurable intermediate ends that are achievable and make progress toward achieving a goal, and consequently, effect the realization of the community's vision.

RESIDENTIAL

Goal

Maintain the existing residential character within the community while providing diverse housing choices and ensuring that residential redevelopment and new infill development complement and enhance the character of the existing neighborhood.

Objectives

1. Infill and redeveloped residential parcels should be integrated with the surrounding area and adjacent parcels.

2. Residential development should preserve important natural features such as steep slopes, watercourses, wetlands, and wooded areas.

3. Residential development should respect historic resources and historic development patterns, preserving and enhancing them where feasible.

4. A diversity of housing types, sizes and locations should be provided to meet the needs of people of different ages, incomes and lifestyles within the community.

5. Amenities such as neighborhood parks, schools, recreational areas and facilities, and open space areas should be encouraged.

6. Encourage the preservation of the established character of developed single-family residential subdivisions.

7. Protect the character of the large, estate-sized parcels, from incompatible new development.

8. Encourage reinvestment in and restoration of older homes.

9. Protect residential areas from encroachment of incompatible non-residential uses.

10. Encourage visually attractive residential development and redevelopment.

11. Encourage some higher density development at appropriate locations.

12. Seek to overcome the perception that the City may already have enough medium and high density development.

13. Encourage the mixture of residential types of residential uses, i.e. multiple family, townhouses, single family residential, and/or non-residential uses (mixed use) that are compatible with the established character of the surrounding neighborhood.

RETAIL/SERVICE

Goal

Redevelop existing retail areas and corridors with appropriately sited and attractively designed retail, service, and entertainment establishments.

Objectives

1. Concentrate commercial development in nodes as opposed to strips along the major corridors.

2. Promote "vertical density" as a method of accommodating additional commercial demand on and better utilizing existing commercial sites.

3. Encourage the use of creative development concepts on commercial sites, such as parking structures, the mixing of uses and increased densities.

4. Promote and maintain high standards for site and building design.

5. Encourage infill development and the improvement of existing retail areas in the Olde Towne area to create an Urban Village and to strengthen Olde Towne as a primary commercial area serving the surrounding neighborhoods.

6. Provide incentives and flexible zoning mechanisms for commercial owners and tenants to upgrade existing commercial sites.

7. Encourage the use of innovative storm water management and efficient building and site development techniques to improve the environment in commercial developments.

OFFICE/RESEARCH/TECHNOLOGY

Goal

Promote the continued expansion and location of office, corporate headquarters, research and development, and other "knowledge-based economy" uses in the City.

Objectives

1. Identify incentives and flexible mechanisms to permit the conversion of existing industrial sites to office/research use.

2. Encourage office and corporate headquarter uses to locate along the M-59 corridor and encourage office/technical research uses.

3. Provide incentives and flexible zoning mechanisms to upgrade existing developments.

4. Promote mixed uses in office/research areas.

5. Encourage the conversion of obsolete industrial buildings to office/research use.

6. Plan for transportation improvements that will support the office/research/technology uses in appropriate areas of the City.

INDUSTRIAL

Goal

Improve the vitality of existing industrial areas while acknowledging the needs of the changing economy.

Objectives

1. Plan for the eventual redevelopment or re-use of existing industrial areas by creating regulations that will permit office/research uses.

2. Investigate the re-use potential of obsolete industrial buildings, and pursue opportunities for land assembly or re-use.

3. Encourage owners of industrial property abutting residential neighborhoods to improve their appearance and provide buffering and screening to protect the residential properties where necessary.

4. Encourage a diversified industrial base by acknowledging the changing economy and permitting the conversion of existing industrial areas to office/research use.

5. Assure that all industries shall not intrude on other uses, physically, visually or through other negative external effects.

6. Eliminate, or hold to a minimum, potential nuisances and damaging environmental impacts that may be associated with industrial uses.

TRANSPORTATION

Goal

Encourage an efficient and safe multi-modal transportation network that facilitates economic growth while integrating various modes of transportation to ensure a higher quality of life for the residents of the community.

Objectives

1. Pursue strategies that will require the use of accepted traffic calming and access management techniques.
2. Promote public education about roadway planning and decision making.
3. Provide a safe, efficient non-motorized pathway system that provides links to various land uses throughout the City.
4. Require transportation infrastructure decisions that support and encourage the land use recommendations of the Master Land Use Plan.
5. Explore innovative traffic designs as an alternative to adding additional lanes.
6. Provide flexible engineering design standards.

RECREATION

Goal

Provide, maintain, expand and improve the parks and recreation system to incorporate a broader array of recreational opportunities that will best serve the needs of Rochester Hills' residents of all ages.

Objectives

1. Promote community open-space or play area in new or redeveloped residential neighborhoods.
2. Expand the range of recreational opportunities and facilities in Rochester Hills as needed to meet residents needs.
3. Improve connectivity, access, and mobility between the existing and planned recreation sites throughout the community.
4. Continue to seek opportunities to share facilities with other public and quasi-public agencies such as the school districts and non-profit organizations and institutions.
5. Encourage the active participation of adjoining neighborhoods in the development, operation, and support of new parks and programs in their area.
6. Link school sites and parks to the non-motorized pathway system.

COMMUNITY FACILITIES AND PUBLIC SAFETY

Goal
Provide, maintain, expand, and improve the community facilities and public safety facilities within the City of Rochester Hills to ensure the preservation of the public's health, safety and welfare.

Objectives

1. Replace aging infrastructure as necessary, with technologically advanced, state-of-the-art infrastructure and materials.

2. Police and Fire facilities should be evaluated on a regular basis to determine if modifications or additions are needed to serve the existing population and new development.

3. Continue to cooperate with surrounding communities and the County to provide public services.

HISTORIC PRESERVATION

Goal
Encourage the preservation and enhancement of historic resources in the City.

Objectives

1. Maintain a listing of historic sites and a corresponding map to document the important structures, determine the supply of historic resources and create a public awareness of their importance.

2. Identify potential historic sites based on the criteria for designation, and periodically add additional sites or districts to the list of historic sites appropriate to the significance of the resource(s).

3. Review impacts on identified historic properties when development potential is proposed on or adjacent to the site.

4. Provide flexible zoning mechanisms to encourage the reuse of historic resources while preserving the historically significant aspects of the resource.

5. Increase the awareness and understanding of historic preservation activities in Rochester Hills.

6. Communicate assistance options available for historic preservation purposes to owners and potential buyers of historic properties.

7. Encourage investment in historic resources.

NATURAL FEATURES

Goal
Preserve intact significant natural features located in the City, and integrate natural feature preservation into land use decisions.

Objectives

1. Preserve steep slopes through the adoption of a steep slope ordinance.

2. Restore degraded steep slope areas, particularly along the Clinton River.

3. Update the City's Floodplain map with the latest FEMA floodplain maps.

4. Preserve wetlands, watercourses, and woodlands as development occurs. Wetlands, watercourses, and woodlands are encouraged to be located in open space areas.

5. Encourage sustainable and energy-efficient "green" development in accordance with the latest version of the applicable Leadership in Energy and Environmental Design (LEED) standards published by the U.S. Green Building Council.

Goal

Develop and enforce a comprehensive storm water management program to protect the natural environment from effects commonly associated urbanization, including flash flows (higher peak flows and lower base flows) stream bank erosion, increased stream temperature and pollutant load, reduced bank vegetation, and degraded aquatic wildlife habitat.

Objectives

1. Implement site appropriate structural and nonstructural best management practices that prevent or minimize the impact on water quality.

2. Develop ordinances to limit the rate and volume of storm water discharge to pre-development levels.

3. Establish in-stream maximum flow targets designed to minimize stream bank erosion and maintain healthy aquatic populations.

4. Coordinate release volumes and rates from detention ponds to achieve in-stream maximum flow targets.

5. Require long-term operation and maintenance standards for storm water facilities to retain the level of water quality protection over time.

PLANNING and COMMUNITY DEVELOPMENT

Goal

Ensure ongoing community planning and the implementation of Master Land Use Plan recommendations

Objectives

1. Review and update the Master Land Use Plan every 5 years to address changing conditions, redevelopment opportunities, and the changing needs of the community.

2. Cooperate with nearby communities through the exchange of information on development and redevelopment issues, and other shared interests, such as community facilities and services, and development along shared boundaries.

3. Continue to educate the community on civic affairs.

4. Continue to promote a user friendly City Hall and an interactive and public awareness program as part of the development review process.

7. Future Land Use

The future land use concept described on the Future Land Use Map and in the following land use descriptions is based on a hybrid approach to land use regulation. The hybrid approach combines elements of traditional use-specific land use planning and form-based concepts that are more concerned with the appearance and layout of development than the particular uses that are housed within the buildings.

With this hybrid approach, the Future Land Use Map designates certain areas of the City for flexible uses, and describes the expected character and feel of development in these areas of the City instead of concentrating on particular land uses. Some limited use restrictions are included in the descriptions of the flexible non-residential category to prohibit egregious abuses of form based regulations, such as the over-provision of retail space in an area designated for mixed use development.

While the form-based flexible use standards promote mixed uses, the majority of the City's land area is still planned for more traditional use-specific land use designations, such as single-family residential, multiple-family residential, and office. No flexibility in land use is to be permitted in the traditional use-specific areas.

The land use/design categories are illustrated on the Future Land Use Map on Page 7.12 and are described beginning on the following page.

Future Land Use Goals

The Future Land Use Plan is designed to guide the 20-year vision for the City created during the Master Planning process. The key components of the Future Land Use vision are:

- **PROTECT RESIDENTIAL AREAS**
  Above all other considerations, viable and stable residential areas are protected from change. The Future Land Use Map does not recommend density or land use changes for most all residential neighborhoods. Only uses currently permitted in single family areas should be permitted in those areas in the future.

- **PROHIBIT EXPANSION of COMMERCIAL LAND**
  Commercial land uses should not expand beyond their current limits. By not providing new land for commercial expansion, the Master Land Use Plan encourages the redevelopment of existing commercial areas.

- **ENCOURAGE MIXED USES**
  Mixed uses, including various combinations of residential, commercial, office, and other uses, are recommended for areas of the City where non-single family residential land uses currently exist. Mixed uses help to create diverse, exciting places that will keep Rochester Hill's non-residential areas current and viable. Mixed uses also offer the City and landowners the flexibility to meet changing market needs, increase housing choice, and more easily permit the construction of non-single family residential land uses.

Residential Districts

The residential category includes a number of districts based on density in dwelling units per acre. The primary land use in the residential categories is detached single family dwelling units, while other types of land uses such as schools, churches, parks, and attached single family dwelling units such as townhomes or attached condominiums are appropriate in certain locations.

In all cases, providing connectivity between adjacent developments is a priority. Stub streets must be provided in all residential developments that abut vacant land or land with redevelopment potential, unless the Planning Commission waives the stub street requirement. At least one stub street must be provided to each property line that abuts such land.

- ***Estate Residential***: Estate detached single-family development with a maximum density of 1 dwelling unit per acre. This district is intended to be the most rural in character, and is intended exclusively for detached single family dwelling units on large lots.

- ***Residential 2, 2.5, 3, and 4***: These districts are based on the existing single family development pattern, and permit varying densities of detached single-family development based on the established character of the neighborhood. Residential 2 permits a maximum density of 2 dwelling units per acre, Residential 2.5 permits a maximum density of 2.5 dwelling units per acre, and so forth. **The Residential 2, 2.5, 3, and 4 land use areas are intended to coincide with the existing R-1 through R-4 zoning districts.**

It is intended that development in the residential land use categories be tied to overall density in terms of units per *net buildable* acre, rather than minimum lot sizes. This will permit greater flexibility in the development and redevelopment of land, and presents an opportunity to create parks and other types of neighborhood features without reducing the overall potential yield on any particular piece of property.

- ***Residential Mixed Use***: The Residential Mixed Use land use designation is intended to permit the construction of varied residential development types at locations identified on the Future Land Use Map or on parcels greater than 10 acres in area zoned single family residential. Parcels identified for Residential Mixed Use on the Future Land Use Map may also be developed using the conventional standards of the underlying zoning district.

  In areas designated for Residential Mixed Use, attached single family dwelling units may not be the sole unit type in any individual development developed under the residential mixed use standards – it is the intent that development and redevelopment in residential mixed use areas provide a variety of housing types, including both attached and detached single family units.

  The density in Residential Mixed Use areas is intended to comply with the underlying density designation shown on the Future Land Use Map. Quality site design and amenities such as parks, nature preserves, or other types of open space must be provided in MR areas. Senior housing may developed in MR areas at the discretion of the Planning Commission based upon the type of senior

housing proposed (i.e. independent vs. assisted living units) and the impact on the overall site design.

Multiple Family

This category may accommodate a wide range of development types, including attached single-family dwelling units, senior housing, or apartment complexes. In general, the expected density range of development in the multiple family category is expected to be between 8 and 12 dwelling units per acre, depending upon the type and design of the project. Manufactured housing communities are included in the Multiple Family land use category, and are appropriate at their current locations in the City. Given the developed state of the City, no additional land is planned for manufactured housing communities.

Office

This district is intended to accommodate higher-intensity, multiple story office development on sites along M-59 and smaller scale professional offices on sites along Barclay Circle, Auburn Road, and Walton Boulevard, and Rochester Road south of M-59. Corporate headquarters are envisioned as being located along M-59 in this district to take advantage of the regional connectivity and visibility provided by this important State highway.

Regional Employment Center

This district is intended to be the economic engine of the City, and will accommodate a wide range of business types such as light manufacturing, research and development, and headquarters operations. It is intended that design standards be established to ensure that development in this district is attractive, functional, and timeless, while permitting flexibility in the type of use that occurs within the buildings.

In order to ensure that the standards envisioned for development in the Regional Employment Center are realized, development should occur on parcels with a minimum area of 5 acres. In some cases, this may require the assembly of a number of smaller parcels.

It is the intent of this plan that mid-to-high rise office buildings be developed in a office corridor located along M-59, in the middle of the Regional Employment Center, with lower buildings more compatible with surrounding residential neighborhoods being developed at the perimeter of the Regional Employment Center. Refer to the building height standards in the mixed use design standards on page 7.22 for more information.

The Regional Employment Center should also promote a mixture of uses, permit office uses in existing technology parks (provided that adequate parking is available), and an adjustment of setback requirements to permit the expansion of existing buildings or parking areas provided that landscaped street buffers are still maintained.

The boundaries of the Regional Employment Center generally coincide with the Great Lakes Interchange®.

Business/Flexible Use Areas

The Future Land Use Map includes three Business/Flexible Use categories. The majority of the lands planned for Business/Flexible Use are currently used for commercial land

uses. **The future land use plan will permit the introduction of additional land uses into commercial areas, but will prevent commercial land uses from encroaching beyond where they are currently located.**

Lands in the Business/Flexible Use areas will be permitted to develop or redevelop under the existing conventional land use standards set forth in the existing Zoning Ordinance, or under the flexible use guidelines set forth herein.

Flexible use areas may include residential, public, institutional, office, general office, business and personal service uses, and retail commercial land uses. Such uses may be located in mixed-use buildings, or in separate, single-use buildings located on the same site but designed as an integrated development.

Benefits of Mixed Use Development
The intent of the flexible use areas is to allow landowners and the City to be responsive to and accommodate changing market demands. Rather than primarily regulating the use of a property, the flexible use areas are intended to emphasize the appearance, design, and function of development on the site rather than the particular uses that occur in a building. As a result, existing commercial areas in the City will be better equipped to adjust to the changing needs and demands of the market as a wider and more flexible range of uses will be permitted on those sites.

Permitting flexible land uses will also provide some incentive for property owners to redevelop older or obsolete single use commercial projects such as strip retail centers. The redevelopment of older commercial sites will enhance property values and the overall appearance of the City. While the flexible use categories will permit a wider range of land uses, the City will clearly identify the desired look and feel of development by establishing clear guidelines for what is expected of developers. This will assure the City that new mixed-use development is attractive and on par with expectations.

Design Standards for Flexible Use Areas
The flexible use standards will emphasize pedestrian orientation and minimize automotive uses or uses geared towards the automobile. Design standards must be established in the Zoning standards for the flexible use areas to ensure that mixed-use development in a flexible-use area is human-scale and includes civic spaces and amenities. **Design guidelines for projects using the flexible use standards are presented later in this Chapter, and should be the basis for developing the requirements of the flexible use zoning standards.**

Recognizing that automotive services are necessary, properties with gas stations or other automotive uses should be permitted to continue to operate at any site where they currently exist, including any remodeling or reconstruction of the existing use. If new zoning districts are adopted, gas stations and other automotive uses should still be permitted to develop on any land zoned B-5 at the time of the adoption of this Master Plan.

Permitted Uses in Business/Flexible Use Areas
Each Business/Flexible Use Area has two land use descriptions – one land use description that corresponds with the existing conventional zoning standards and one description that corresponds with the flexible use concept. New zoning overlay districts will have to be created to implement the flexible use option. Please refer to Chapter 8 for more details in that regard.

- ***Business/Flexible Use 1 – Residential, Office, Public, Institutional***
  The Business/Flexible Use 1 category is the lowest intensity business use area. Appropriate land uses include:

  Conventional Zoning: Professional and general office uses

  Flexible Use Zoning: A mixture of residential, public, institutional, professional office, and general office uses. Smaller scale senior housing developments that are compatible with adjacent neighborhoods may be appropriate in these areas. Detached single-family dwelling units may be located on reduced area lots to broaden housing choice available in the City and to contribute to the neighborhood feel of the mixed-use area. Retail commercial uses are specifically excluded from Flexible Use 1 areas.

  The Commercial/Flexible Use 1 designation applies to a number of sites in the City that contain historic buildings. These historic buildings must be preserved and integrated into any development on the site to the greatest extent feasible.

- ***Business/Flexible Use 2 – Residential, Commercial, Office, Public, and Institutional***
  The Business/Flexible Use 2 category is the medium intensity business use area. Appropriate land uses include:

  Conventional Zoning: Convenience and Community commercial land uses. Convenience uses include convenience stores, drug stores, dry cleaners, smaller grocery stores, and other establishments that serve the daily needs of persons living in adjacent residential areas. Community uses include larger grocery stores, hardware stores, clothing stores, and other establishments that serve the shopping needs of all residents of Rochester Hills.

  Flexible Use Zoning: A mixture of single family and attached/detached residential housing, multiple-family housing, retail commercial land uses, office uses compatible with residential uses, schools, churches, and day care centers. This flexible land use area may also be appropriate for senior housing developments that are compatible with adjacent neighborhoods and integrated into a larger flexible use development. Detached single-family dwelling units may be included in a flexible use 2 development, provided that they are located on small lots (less than approximately 7,000 sq. ft.) to broaden housing choice available in the City.

  Flexible Use 2 areas are intended to create non-residential "nodes" at key intersections and to provide a transition between the residential land categories and the more intense Business/Flexible Use 3 areas. Accordingly, flexible use developments located in the Business/Flexible Use 2 land use category should include a significant residential component, however, in no case should any flexible use development in a Business/Flexible Use 2 area be comprised solely of residential uses.

- ***Business/Flexible Use 3 – Commercial, Office, Residential, Public and Institutional***
  The Business/Flexible Use 3 land use category is intended to be the most intense business use area in the City. Appropriate land uses include:

  Conventional Zoning: Community and Regional commercial land uses. Community commercial uses are as described in the Business/Flexible Use 2 category. Regional commercial land uses serve the residents of Rochester Hills, as well as residents from other communities in the region and are located on or near roads with very high traffic volumes. Such uses typically include malls, big box stores, super grocery stores, warehouse clubs, department stores, and furniture stores.

  Flexible Use Zoning: A mixture of retail commercial land uses, attached and multiple family dwelling units, senior housing, office uses, schools, churches, and other public uses. Detached single family residences are not permitted in Business/Flexible Use 3 areas.

  While large-scale retail uses are intended to be located in the Business/Flexible Use 3 areas, it is critical that the mixed use concept be properly executed in order to ensure that sites are not developed with large, single-use buildings and equally large parking fields following the existing strip retail prototype. Accordingly, non-retail uses are strongly encouraged in areas developed using the Business/Flexible Use 3 standards.

  Encouraging non-retail and residential land uses will ensure that development in this district retains a walkable, human scale and is not dominated by auto-oriented development. Incorporating residential land uses into mixed use centers will also support entertainment, restaurant, and leisure businesses, increasing the quality of life for all residents of the City.

LANDFILL PLANNING AREA

The landfill planning area is generally bounded by John R., Bloomer, Dequindre, and Hamlin Roads, and includes the existing landfill sites as well as non-landfill sites. Due to the unknown development potential of, and mitigation measures that will be necessary to develop the landfill parcels, permitted land uses in this area may be flexible.

It is anticipated that extensive study will be required to determine appropriate and feasible land uses for the landfill parcels if they are proposed to be redeveloped at a future date.

Development should also be coordinated between the non-landfill and the landfill sites to ensure that development in this section of the City is integrated instead of creating a patchwork of isolated neighborhoods and land uses. Clean non-landfill parcels located in the landfill planning area should be incorporated into any landfill redevelopment plan. For instance, some of the development potential of the landfill parcels may be sent to the non-landfill parcels, helping to offset the cost of remediation of the landfill sites.

Proposals for non-landfill parcels located within the landfill planning area that are not connected with or include the redevelopment of a landfill parcel shall comply with the requirements of the Residential 3 land use category.

INDUSTRIAL

Areas planned for industrial uses are appropriate for light industrial land uses that are characterized by light manufacturing operations that are not of sufficient size or scale to negatively impact surrounding non-industrial use areas. Examples of such light industrial uses include bump and paint shops, warehousing and wholesaling, and light assembly operations.

Future Land Use Considerations

The following are important considerations when evaluating the impact of a proposed zoning or land use change in the community, and should be considered by the Planning Commission and City Council whenever a zoning change, development, or redevelopment is proposed:

Natural Features

The Natural Features/Future Land Use overlay map on page 7.13 is intended to show the results of the Natural Features Inventory on the future land use map. This Natural Features map highlights the proposed future land uses in natural features areas. **The Planning Commission and City Council should use the Natural Features/Future Land Use overlay map as a guide when considering the potential impacts of zoning changes or development in areas where natural features are located.**

Historic and Cultural Resources

Historic and culturally significant community resources such as historic homes and structures, landmark trees, or places of significance must be considered when making land use decisions. These historic and cultural resources create a sense of continuity and identify places in the community, and are irreplaceable resources that cannot be recovered if lost. Therefore, historic and culturally significant community resources must be preserved from destruction.

Historic and culturally significant areas of the City fall into one of two categories: 1) sites that have received historical designation by the City's Historic Districts Commission and/or are on the National Register of Historic Places; or 2) potential historic sites. Thirty-three (33) historic districts were designated with the adoption of the Historic Districts Ordinance in 1978. Two of the districts (the Village of Stoney Creek and Winkler Mill Pond) are contiguous, while the other 31 districts are non-contiguous sites.

Properties that are located within a historic district designated by the City are protected from demolition and must go through a review and approval process before any modifications can occur to the exterior of the properties.

The Planning Commission and City Council should use the Historic Districts/Future Land Use overlay map on page 7.14 as a guide when considering the potential impacts of zoning changes or development in areas where historic and cultural resources are located. The overlay map shows the location of designated historic districts. If the City amends the boundaries of designated historic districts, or if new historic districts are adopted, the overlay map should be updated.

Historic Preservation Policy

The City's Historic Preservation Policy recognizes the value of protecting the community's historic resources and promotes well managed development and redevelopment that can beneficially coexist with preservation activities. The success of historic preservation in the city of Rochester Hills is dependent upon the proactive approach of the Planning Commission, City Council and Historic Districts Commission in implementing the following policies (the City's Preservation Policy document should be consulted for complete information and implementation guidelines).

1. *Existing and Potential Historic Sites.* Maintain a listing of historic sites and update the Historic Districts/Future Land Use Map as necessary. Potential historic sites will be identified based on the criteria for designation, and any sites that qualify should be added to the list of historic sites.

2. *Development or Redevelopment.* The impacts of development on a historic site or resource must be evaluated whenever development is proposed on or adjacent to a historic site, and land use decisions within a historic district must be made in accordance with the preservation policy objectives.

3. *Zoning and Land Use.* Historic properties should be zoned to assure ongoing use and maintenance of the structure. Ideally, the first choice for historic properties would be to maintain the original use(s) of the property. Flexibility in zoning and consideration of adaptive reuse of historic structures is encouraged, but must be authorized according to procedures that will maximize retention of the historically significant aspects of the site or structure.

4. *Public Awareness.* Public awareness of historic sites/structures and historic preservation activities in Rochester Hills should be bolstered through informational materials, technical assistance and other programs, including outreach to the Real Estate community to educate realtors and potential buyers about the impact of historic district standards.

5. *Economic Feasibility.* Available options for historic preservation purposes must be communicated to the owners and potential buyers of historic properties. Many creative options are available to assist in the rehabilitation and renovation of historic properties, including state and federal tax credits, grant and loan programs, and local technical expertise.

Transitional or Land Use Change Areas

Proposed zoning changes or development in areas where the Master Plan recommends a change in land use (i.e., areas where the future land use designation is different than the existing zoning designation) *must not occur in a piecemeal fashion.*

Where there are established residential neighborhoods that are planned for land uses other than single family residential, a rezoning to a nonresidential land use must not be approved unless the proposed rezoning parcel includes a clear majority of the existing residences and will not isolate existing residential land uses. For instance, a proposed rezoning to a nonresidential zoning district on an isolated lot that will be surrounded by single family homes shall not be approved.

It is imperative that piecemeal rezonings that would create a patchwork of land uses in an area be avoided, and that stable residential neighborhoods be maintained until such time as the entire residential area is ready to transition to a new land use as a whole.

Gateways

Key entrances into Rochester Hills serve as gateways, and are the City's first opportunity to convey a positive image of the City to visitors and residents. Some gateways already have substantial improvements, such as the landscaping and monument identification sign on Walton Boulevard near

Oakland University. In other locations, gateway entrances have received only modest treatments and may only have a steel highway sign. Gateway entrances are not uniform in design, materials, or placement. **The City should implement the adopted comprehensive gateway plan to improve the variable and haphazard treatments that exist at community entrances.**

Gateway Hierarchy
Gateways are divided into 3 levels based on their role in the community image building process:

Level 1 gateways are located at highly traveled entrances into the City, and should present a substantial arrival and welcome statement. Treatments at Level 1 gateways should include impressive monument signs and ample landscaping.

- Walton Boulevard at the western border of the City.
- M-59/Adams Road Interchange
- M-59/Crooks Interchange
- M-59/Dequindre Road Interchange
- Crooks/South Boulevard
- Rochester Road/South Boulevard
- Dequindre Road/Avon Road

Level 2 gateways are located at important sub-districts within the City. These gateways should incorporate the common design elements used in the overall Gateways plan, but should also incorporate some elements reflective of each particular sub-district. Recommended locations for level 2 gateways include:

- M-59/Rochester Road (shopping district)
- Dequindre/Auburn Road (Olde Towne)
- Dequindre/Washington (Stoney Creek Historic District)
- Auburn/Adams (Regional Employment Center/Smart Zone)

Level 3 gateways are located at the remaining entrance points into the City along major thoroughfares. These gateways should incorporate the same design elements as level 1 gateways, but at a more modest and easily maintained scale.

Green Development

The built environment has a profound impact on our natural environment, economy, health and productivity. For instance, the U.S. Green Building Council reports that in the United States, buildings account for 36% of total energy use, 65% of electricity consumption, 30% of greenhouse gas emissions, 30% of raw materials use, 30% of waste output (136 million tons annually), and 12% of potable water consumption.

"Green Development" refers to environmentally friendly and energy efficient site and building design. Breakthroughs in building science, technology and operations are available to designers, builders and owners who want to build green and maximize both economic and environmental performance.

Green buildings offer both environmental and economic benefit. Environmental benefits include the use of less electricity, the reduction of solid waste and greenhouse gas emissions, and the conservation of natural resources, while economic benefits include reduced operating costs, reduced

strain on local infrastructure, increased employee satisfaction and performance, and increased life-cycle economic performance, and increased sales at retail stores.

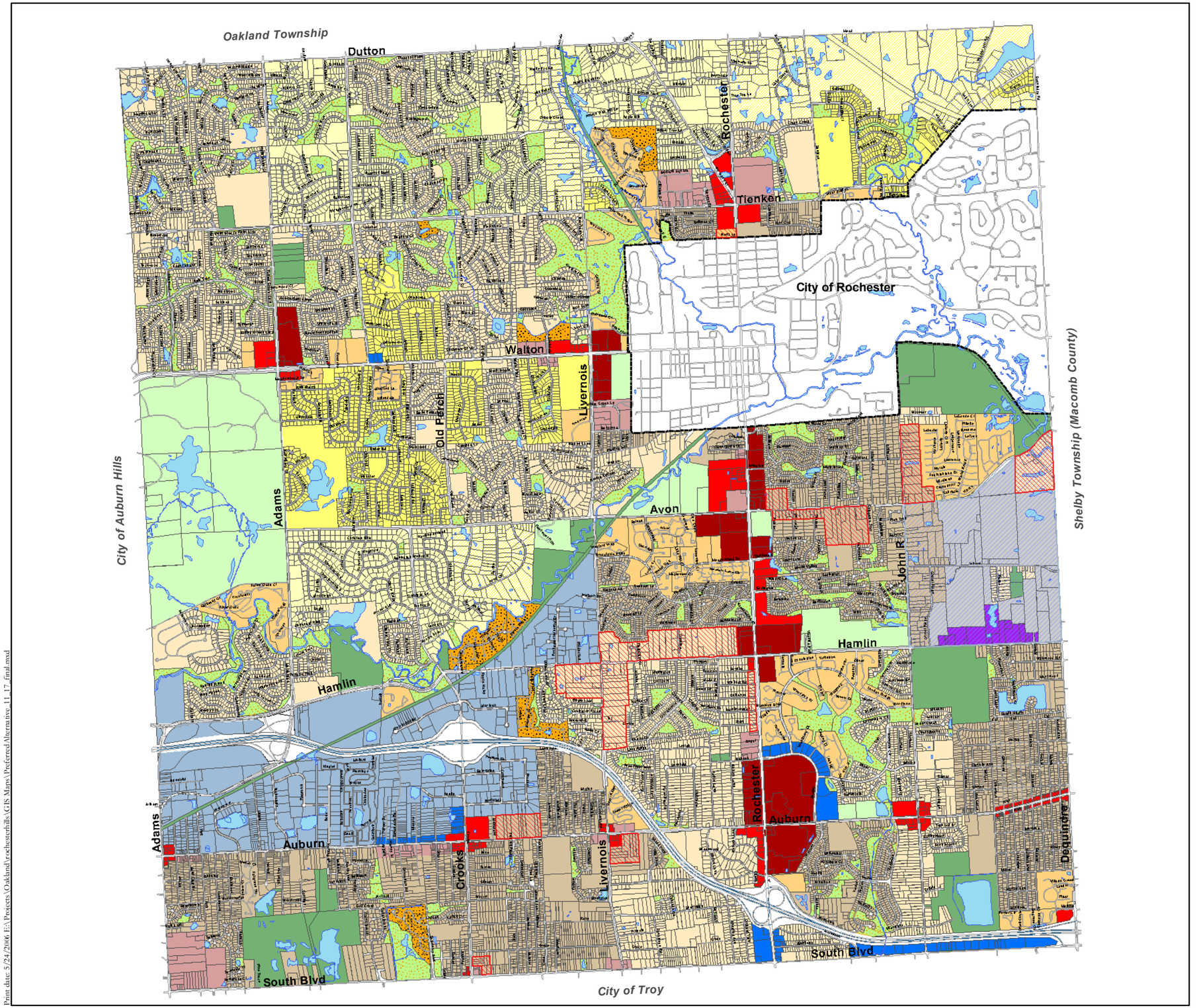
In summary, green buildings typically require a small additional cost (estimated to be 1-5%) to construct when compared to conventional construction, however, green buildings are less costly to operate and maintain, are energy- and water-efficient, have higher lease-up rates than conventional buildings in their markets, and are a physical demonstration of the values of the organizations that own and occupy them.

Future Land Use Preferred Alternative

Draft

5/24/2006

City of Rochester Hills, Michigan



- Estate Residential
- Residential 2
- Residential 2.5
- Residential 3
- Residential 4
- Multiple Family
- One Family Cluster
- Business/ Flexible Use 1
- Business/ Flexible Use 2
- Business/ Flexible Use 3
- Office
- Regional Employment Area
- Landfill
- Industrial
- Special Purpose
- Park/Public Open Space
- Private Recreation/ Open Space
- Landfill Planning Area
- Mixed Residential
- Water

0 3,500 7,000 Feet

Base Map Source: City of Rochester Hills GIS, 2004
Data Source: McKenna Associates, Inc., 2005

McKenna Associates Incorporated

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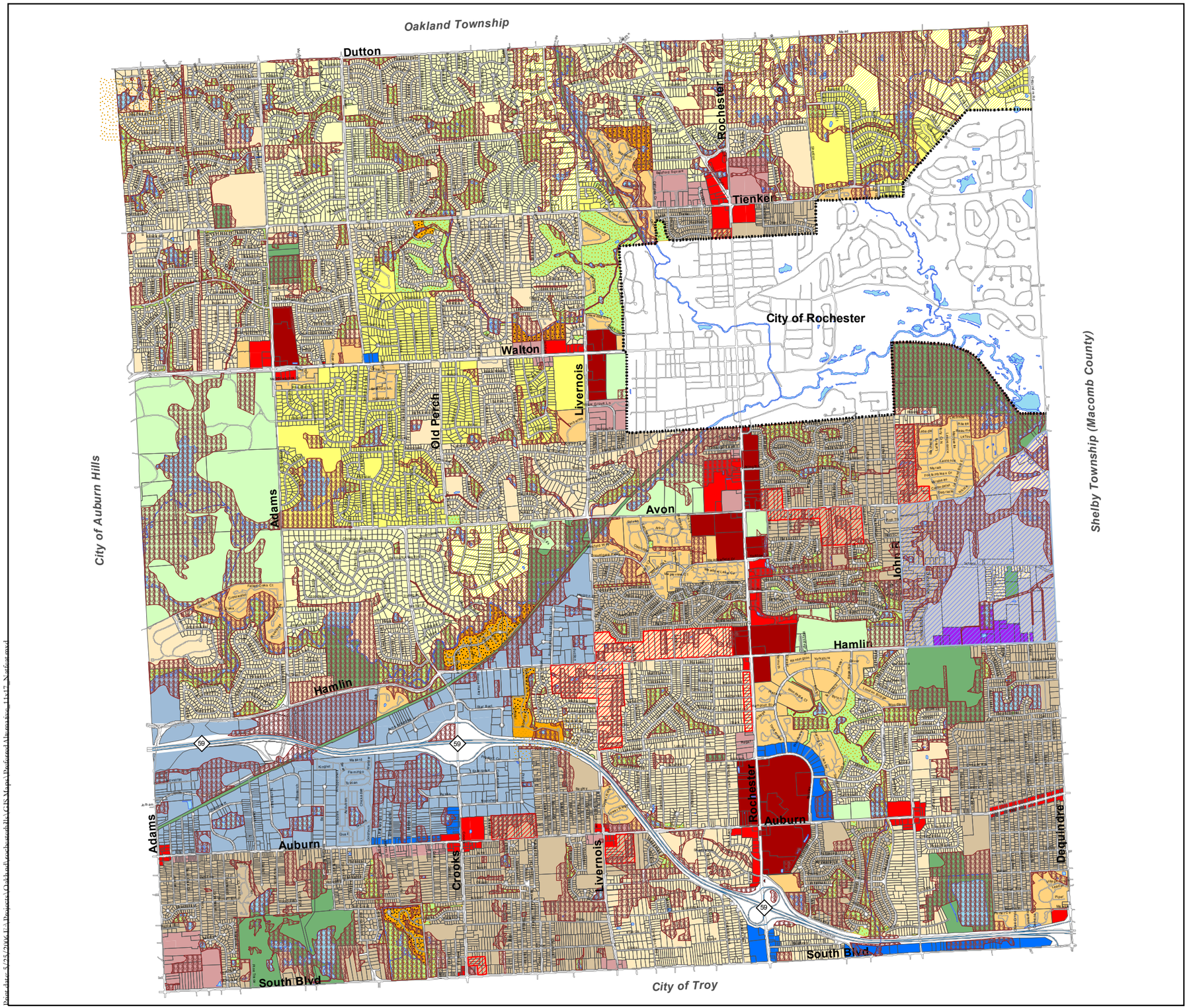
Future Land Use
Natural Features Overlay

Draft

City of Rochester Hills,
Michigan



- Estate Residential
- Residential 2
- Residential 2.5
- Residential 3
- Residential 4
- Multiple Family
- One Family Cluster
- Business/ Flexible Use 1
- Business/ Flexible Use 2
- Business/ Flexible Use 3
- Office
- Regional Employment Area
- Landfill
- Industrial
- Special Purpose
- Park/Public Open Space
- Private Recreation/ Open Space
- Landfill Planning Area
- Mixed Residential
- Natural Areas
- Water

0 3,500
Feet

Base Map Source: City of Rochester Hills GIS, 2004
Data Source: McKenna Associates, Inc., 2005

McKenna Associates Incorporated

5/25/2006

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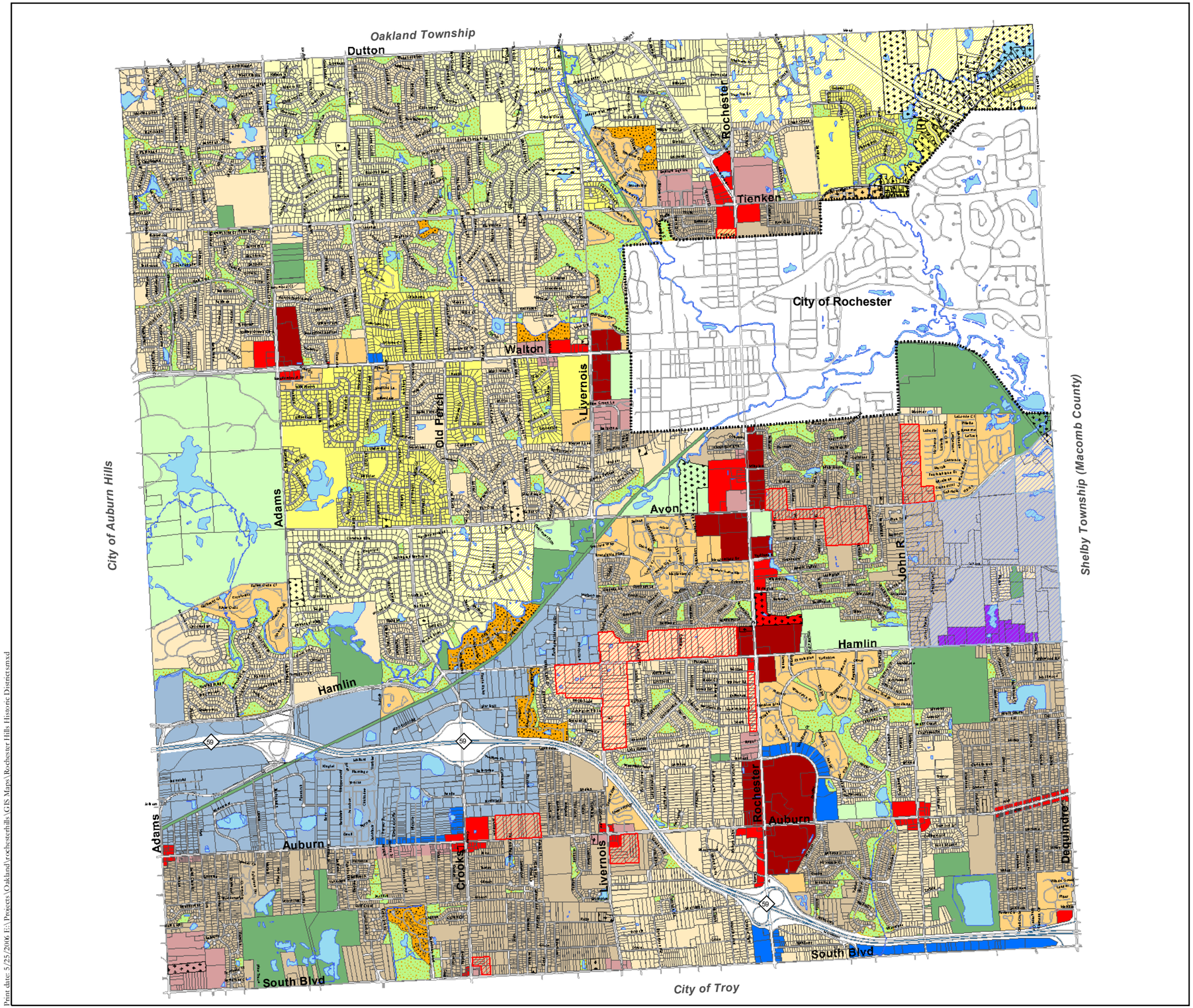

Future Land Use Historic District Overlay

Draft

City of Rochester Hills, Michigan

- Estate Residential
- Residential 2
- Residential 2.5
- Residential 3
- Residential 4
- Multiple Family
- One Family Cluster
- Business/ Flexible Use 1
- Business/ Flexible Use 2
- Business/ Flexible Use 3
- Office
- Regional Employment Area
- Landfill
- Industrial
- Special Purpose
- Park/Public Open Space
- Private Recreation/ Open Space
- Landfill Planning Area
- Mixed Residential
- Historic District
- Water

0 3,500 Feet

Base Map Source: City of Rochester Hills GIS, 2004
Data Source: McKenna Associates, Inc., 2005

McKenna Associates Incorporated

5/25/2006

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Flexible Use Design Guidelines

The purpose of incorporating flexible use areas into the Future Land Use Map is to reduce (but not eliminate) the importance of specific land uses and to increase the importance of design and appearance in new developments. The result will be to create more flexible land use regulation that permits a few broad categories of land use without making fine distinctions between uses in each broad category while, at the same time, creating attractive development following the guidelines presented herein. **It is recommended that new overlay zoning districts using form-based regulation be created for the flexible use areas to implement the design guidelines presented below.**

The following guidelines apply to the three Flexible Use areas and the Regional Employment Center (REC) land use area. Guidelines are presented relating to the permitted blend of uses, height, site layout, and building design for each of the flexible use areas. Not every design guideline will be applicable to every site, so the applicable standards must be determined during the site plan review process.

This section presents guidelines for:

1. ***Blend of uses in flexible use areas***. The use guidelines are intended to establish an appropriate range of uses that may be included in a flexible use area.

2. ***Perimeter street frontage guidelines***. These guidelines establish the appropriate location of improvements relative to an existing thoroughfare. The guidelines establish proper locations for buildings, parking, and landscaping depending upon the location of the site and the character of the thoroughfare upon which they are located.

3. ***Interior site design***. Extensive design guidelines are presented for the interior portions of a site. These guidelines are general in nature, and may not apply to every site in every situation. These guidelines are intended to form a toolkit from which quality pedestrian-scale development may be constructed.

Blend of Uses in Flexible Use Areas

Developments with a horizontal mixture of uses must be designed to provide connectivity and a relationship between the various uses. Residential units and non-residential development must not be separated, but integrated into a seamless development with vehicular and pedestrian connections. Developments with a mixture of uses located within a single building are also permitted. Retail uses are encouraged on the first floor of buildings, and in no case may a non-residential use be located on a floor above a residential use.

In order to create the desired intensity and feel in each flexible use area, it is important to limit "how much" of each land use type is permitted. The primary method of regulating use in the flexible use areas is the Floor Area Ratio (FAR). The FAR is a measure of gross floor area dedicated to a particular use as compared to the gross site area, and is calculated by dividing the total floor area dedicated to a particular use by the area (in square feet) of the site.

FAR is similar to lot coverage, except that it takes into consideration the total floor area included in a building and is not based off of the "footprint" of a building. Therefore, multiple-story buildings result in a higher FAR than a single

story building. For example, a single-story building with 30,000 square feet of floor area located on a 3-acre site would have a FAR of 0.23, while a two story building with 60,000 square feet of floor area on the same 3-acre site would have a FAR of 0.46.

For reference, the following are typical Floor Area Ratios for conventional commercial development in a suburban environment:

Strip mall:	*0.13 – 0.15*
Drug Store:	*0.15 – 0.20*
Fast Food Restaurant:	*0.075 – 0.10*
Sit Down Restaurant:	*0.09 – 0.12*
Bank w/Drive Through:	*0.09 – 0.12*
Big Box Store:	*0.08 – 0.10*

The following is a brief description of land uses permitted within each broad use type included in Table 7.1:

Detached Single Family Residential: Detached single-family dwelling units.

Attached Residential: A building that includes two or more dwelling units. May include duplexes, row houses, townhouses, multiple-family structures, or senior housing facilities.

Dwelling Units above Non-Residential Uses: Residential dwelling units located on the second, third, or fourth floor of a building, and above a non-residential use such as retail commercial or office.

Institutional: These uses include public or not-for-profit uses such as hospitals, schools, government buildings, museums, libraries, public safety buildings, churches, or fraternal organizations.

Professional Office: Offices for professional or corporate uses that do not generate a large volume of public traffic and generally do not require clients or customers to visit the office. Examples of such offices include but are not limited to accounting; advertising; architects, engineers, and planners; attorneys; data processing and computer services; educational, scientific and research organizations; government offices including agency and administrative office facilities; management, public relations and consulting services.

General Office: Offices for uses that provide direct services to consumers and require clients or customers to visit the office. Consequently, general office uses generate public traffic into and out of the office, and typically have a larger parking requirement than professional offices due to that daily customer traffic. Examples of general offices include, but are not limited to, medical and dental offices; insurance agencies; title insurance agencies; photography, art, and dance studios; interior design studios; contractor's showrooms; real estate offices; travel agencies; child care centers; financial services such as banks, financial advisers, and investment services.

Business and Personal Service: Establishments that offer services to businesses or persons. Examples of business services include, but are not limited to, employment agencies, photocopying and printing centers, business machine repair shops and technology services. Examples of personal services include, but are not limited to laundry, beauty shops, spas, hair care and salons.

Retail Commercial: Establishments that operate as fixed point-of-sale locations and are designed to attract a high volume of walk-in customers. Retail establishments often have displays of merchandise and sell to the general public for personal or household consumption, though they may also serve businesses and institutions. Some establishments may further provide after-sales services, such as repair and installation. Examples of retail commercial land uses include the sale of furniture, electronics, sporting goods, books, and food, as well as pharmacies, florists, party stores, and other similar uses.

Retail commercial land uses do not include automotive uses such as gas stations, repair garages, tire and muffler shops, or other similar uses.

Amenities: Features or elements of a development that are available to the users, residents, or public at large. Examples of amenities include but are not limited to parks, open space, exceptional landscaping, nature preserves, recreational facilities such as swimming pools or athletic courts, or public art.

The following Table 7.1 lists the general use types appropriate in the various flexible use areas, along with the recommended maximum FAR permitted for each general use type in each of the flexible use areas. For instance, on a 10 acre site in a Business/Flexible Use 2 district, up to 87,120 square feet of retail space may be permitted. This is calculated by multiplying the area of the site (in square feet) by the permitted FAR of 0.2. This calculation is completed for each type of use in a development using the flexible use zoning standards.

Table 7.1
Recommended Maximum Floor Area Ratio in Flexible Use Areas[1]

Use Type	Maximum FAR			
	Flex. Use 1	Flex. Use 2	Flex. Use 3	REC
Total of all Uses	0.75	1.0	1.5	3.0
Detached Single Family Residential (area of homes, not lot area)[2]	0.10	0.075	--	--
Attached Residential (single-use building)[1]	0.25	0.2	0.15	0.03
Dwelling units above non-residential land uses	0.5	0.75	1.0	--
Institutional	0.75	1.0	1.5	3.0
Professional Office	0.75	1.0	1.5	3.0
General Office	0.75	1.0	1.5	3.0
Business and Personal Service	--	0.5	0.75	0.05
Retail Commercial	--	0.20	0.60	0.02
Amenities[3]	0.05	0.05	0.04	0.04

Notes:

1. FAR's do not include area dedicated to parking. The minimum parking requirements must be complied with for each separate use proposed on a site.
2. May only be permitted in conjunction with a non-residential land use on the site. Attached or detached single family residential may not be the only land use on a site in a mixed-use district.
3. Minimum area required on the site.

PERIMETER STREET FRONTAGE

A crucial component in creating a sense of place is the feeling from the street. The primary function of streets in suburban communities such as Rochester Hills is to provide efficient, fast travel for the highest number of cars. Traditionally, streets have served as civic spaces, with the buildings and spaces adjacent to the street being a part of the street.

Great streets are built on a human scale that offers a sense of enclosure created by the proportion of the height of the buildings or other elements lining the street and the space between the elements. However, when low buildings with large front yard setbacks are built along a road, no sense of enclosure is created, making pedestrian travel more dangerous and difficult.

In order to create a sense of enclosure, buildings in flexible use areas should conform to one of 4 perimeter road frontage types. These frontage types are intended to create a greater sense of enclosure along thoroughfares in the City without limiting or reducing the capacity of the roads to efficiently and safely move traffic. The perimeter road frontage types include options with buildings located close to the road, and options with buildings set farther back from the road with other elements such as trees located close to the road to provide a sense of enclosure.

The following Table 7.2 identifies potentially appropriate perimeter street frontage types for each flexible use area. The perimeter street frontages are described in Table 7.3 and in the illustrations on the following pages. **Table 7.2 is a only a guide, ultimately, the exact location for each type of street frontage must be determined when the Flexible Use Zoning Ordinance requirements are created.**

Table 7.2
Perimeter Street Frontage Types

Location	Permitted Frontage Types			
	Flexible Use 1	Flexible Use 2	Flexible Use 3	REC
Rochester Road	B	B, C	B, C, D	--
Walton Boulevard	A, B, C	A, B, C	A, B, C, D	--
Adams Road	A, B, C	A, B, C	--	B, C, D
Auburn Road (Olde Towne)	--	A, B, C	--	--
Auburn Road (Other Location)	A, B	A, B, C	A, B, C, D	B, C, D
Tienken Road	A, B, C	A, B, C	--	--
South Boulevard	A, B, C	A, B, C	--	--
Other Major Road[1]	A, B	A, B, C	--	B, C, D

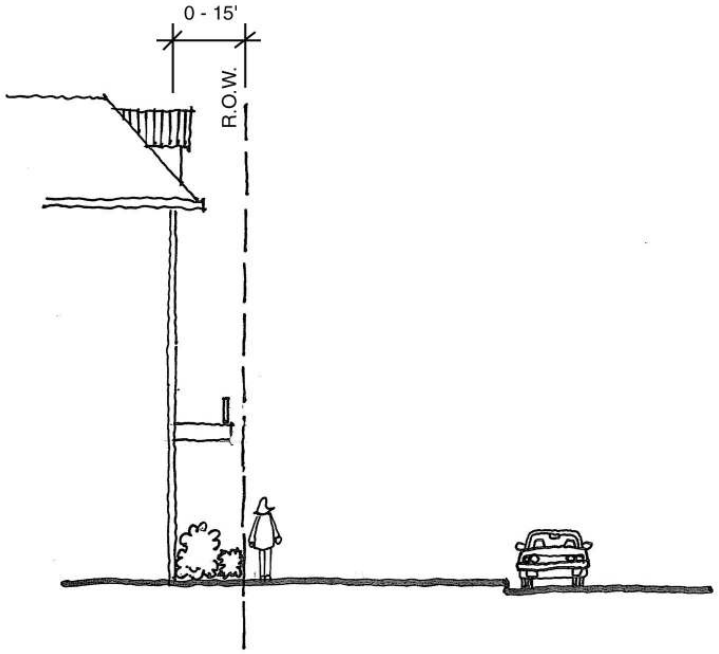
1. Major roads include County Roads, State Roads, and Principal, Major and Minor arterials as identified by the City's Master Thoroughfare Plan.

Table 7.3
Perimeter Street Frontage Type Design Guidlines

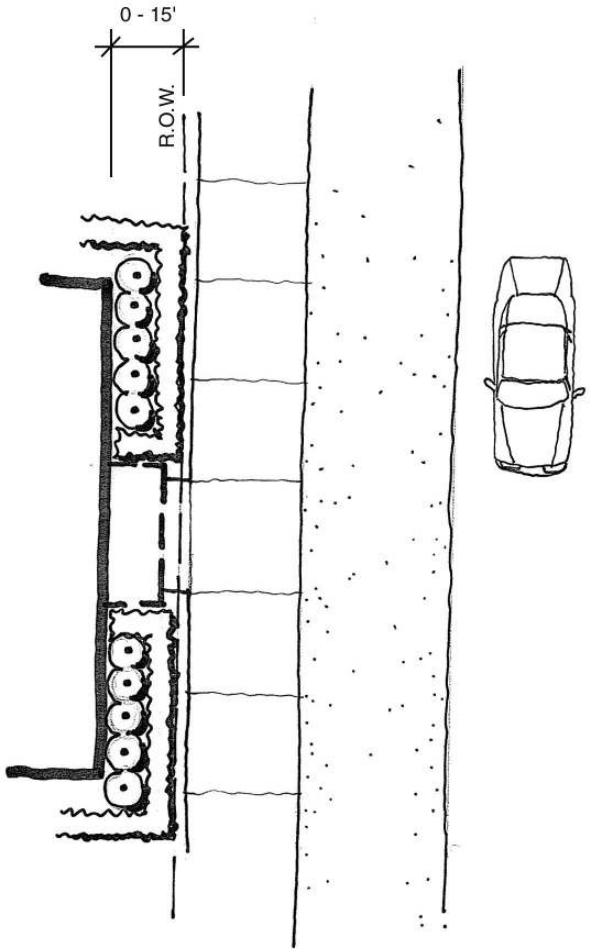
Guideline	Frontage Type			
	A	B	C	D
MINIMUM Front Building Setback	0-5 ft.[1]	25 ft.	70 ft.	None
MAXIMUM Front Building Setback	15 ft.	50 ft.	90 ft.	None
Parking Permitted in Front Yard?	No[2]	No[2]	1 row	Yes
Landscape Buffer Required Adjacent to Future ROW	None	25 ft.	10 ft.	50 ft.

1. 0 ft. setback in the Olde Towne area, 5 ft. setback elsewhere.
2. Parking areas may not be located closer to the street than the front of the building.

PERIMETER STREET FRONTAGE TYPE A



SECTION VIEW

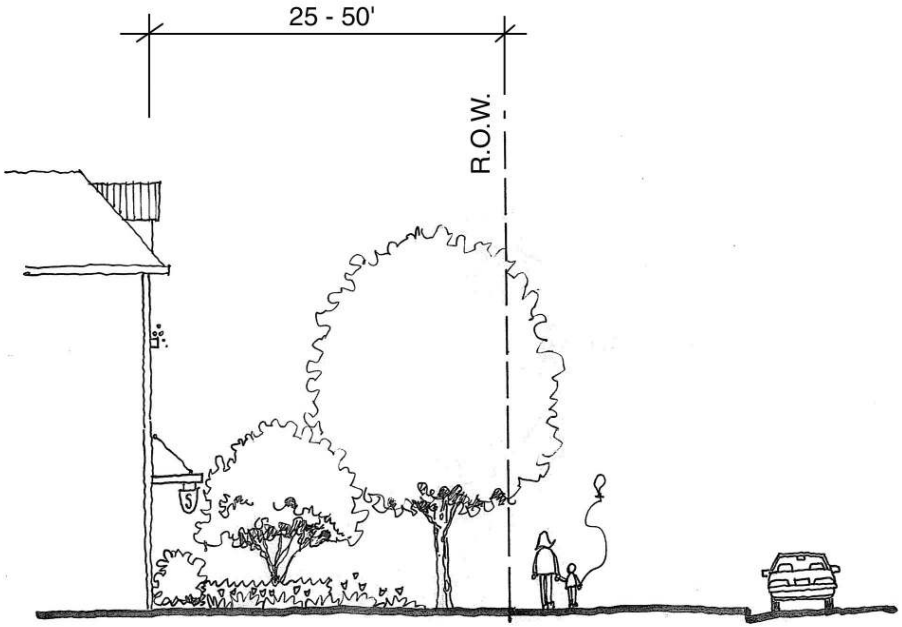


PLAN VIEW

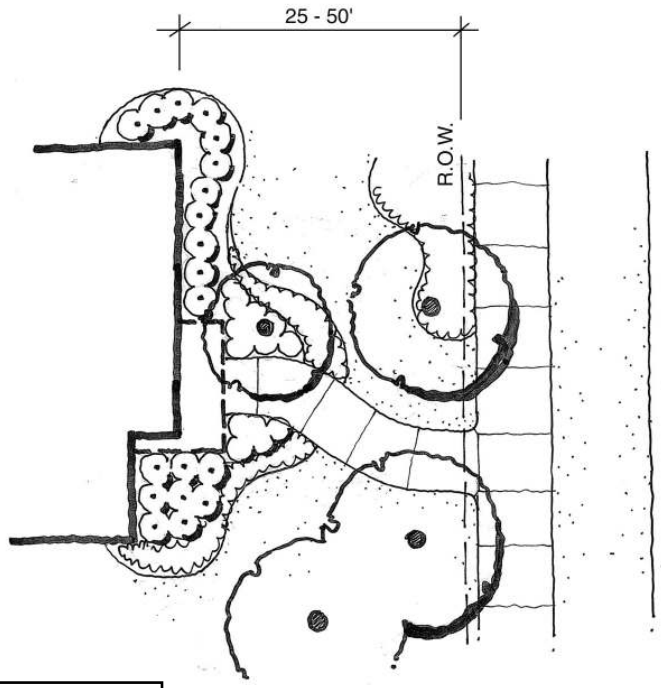
NOTES

- 0 foot front setback recommended for Olde Towne area, 5 ft. elsewhere.
- Rear or side yard parking - no parking between the building and the street.
- Parking areas may not be located closer to the street than the front building line.
- No landscaping required between the building and the right-of-way, however, foundation plantings should be provided if room is available.
- Buildings should have a minimum height of 20 feet and be constructed out of high quality, decorative materials (refer to the Architecture and Building Design standards on page 7.26 for more details).

PERIMETER STREET FRONTAGE TYPE B



SECTION VIEW

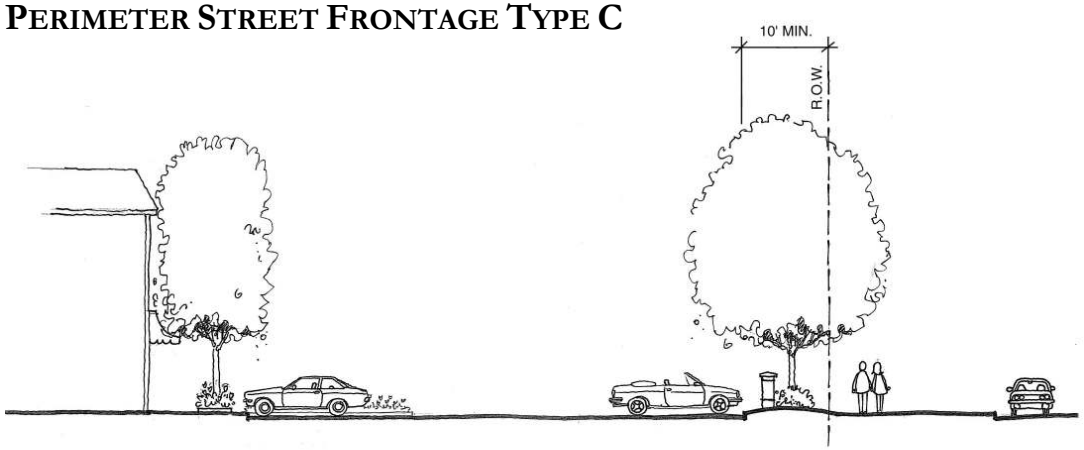


PLAN VIEW

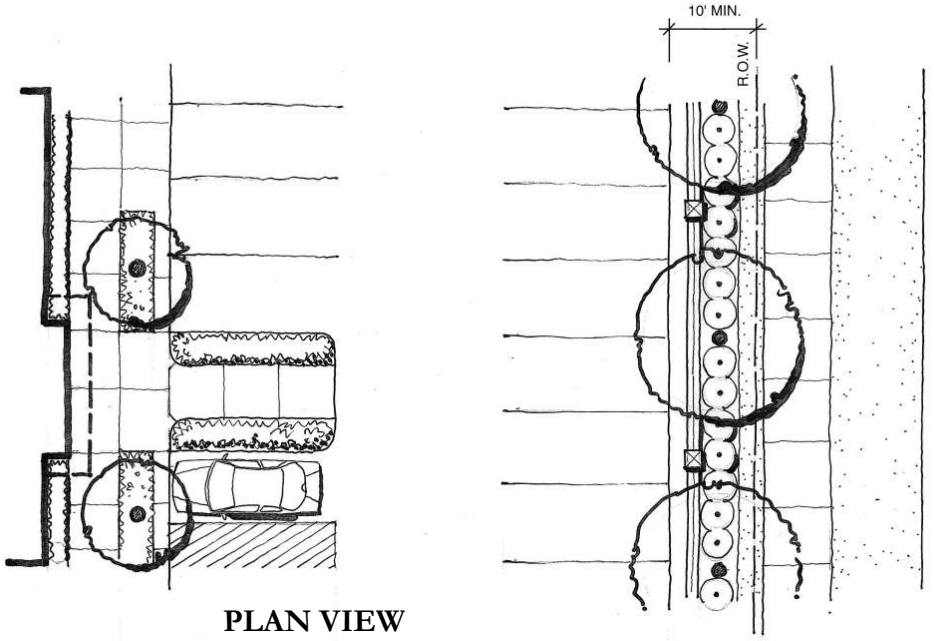
NOTES

- Rear or side yard parking - no parking permitted between the building and the street.
- Parking areas may not be located closer to the street than the front building line.
- Landscaping should be provided between the building and the street, consisting primarily of deciduous trees and shrubs.
- Buildings should be designed with an entrance facing the street, with pedestrian connections to the roadside sidewalk.
- Buildings should have a minimum height of 20 feet and be constructed out of high quality, decorative materials (refer to the Architecture and Building Design standards on page 7.26 for more details).

PERIMETER STREET FRONTAGE TYPE C



SECTION VIEW

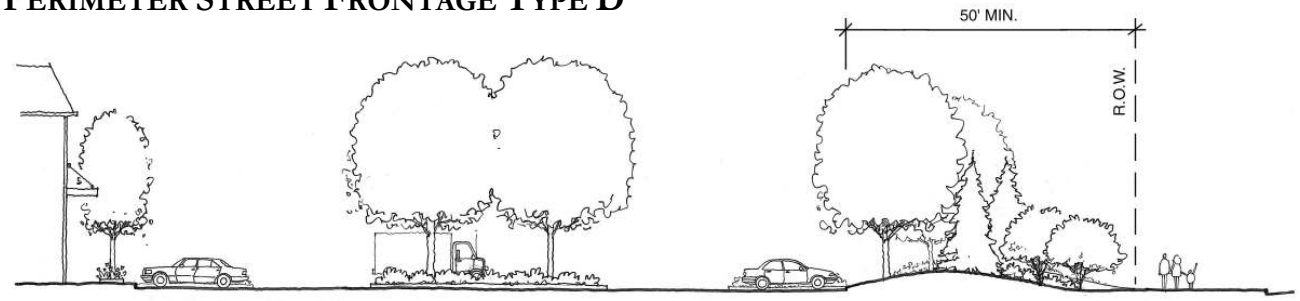


PLAN VIEW

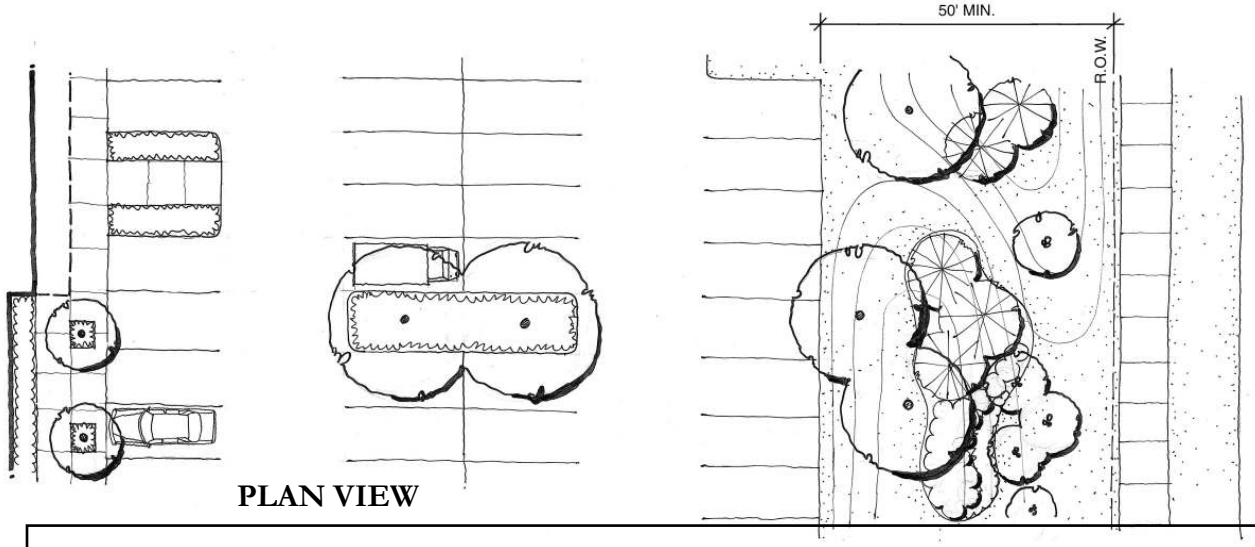
NOTES

- 1 row of parking permitted in the front yard. Additional parking must be located to the side or rear of the building.
- Landscaping must be provided in a 10 foot buffer strip between the parking area and the street.
- The landscape buffer shall consist of deciduous canopy trees and a low opaque screen to a height of 42 inches (3.5 feet). The opaque screen may consist of evergreen shrubs planted not more than 2.5 feet on center, a decorative brick wall, or an alternate method that will achieve the same result.
- Buildings should be designed with an entrance facing the street, with pedestrian connections to the roadside sidewalk.
- Buildings should have a minimum height of 20 feet and be constructed out of high quality, decorative materials (refer to the Architecture and Building Design standards on page 7.26 for more details).

PERIMETER STREET FRONTAGE TYPE D



SECTION VIEW



PLAN VIEW

NOTES

- A 50-foot wide buffer must be planted adjacent to the right-of-way.
- The landscape buffer should consist of a mixture of densely planted evergreen and deciduous trees, with a minimum of 1 tree per 10 lineal feet of right-of-way frontage.
- Berms are optional in the buffer area. Any berm shall be undulating in nature. Rigid, uniform berms are not permitted.
- Buildings should be constructed out of high quality, decorative materials and have an attractive appearance. Architectural details shall be included to break up the mass of large buildings. Refer to the Architecture and Building Design standards on page 7.26 for more details.

INTERIOR SITE LAYOUT

The flexible use areas are intended to permit a wide range of uses, while demanding a high level of site and building design. The intent is to create unified, integrated mixed-use developments and to avoid the typical mixed-use development consisting of a series of individual "pods" that essentially rezone portions of the site for single types of uses. This "pod" style of mixed-use development merely reproduces traditional single-use zoning on a smaller scale, isolating different uses on distinct and separate portions of the site, which does not provide any of the benefits of a well-designed mixed-use development.

The single most important element in the functional and physical integration of mixed-use development is pedestrian orientation. The overall layout of a flexible use project should be built around a viable pedestrian network that includes improvements necessary to generate a high level of pedestrian activity. There are 3 primary components create pedestrian oriented design:

- A block structure that reflects a walkable environment.
- Building placement, orientation and design to enhance the pedestrian environment and streetscape.
- A street network to define block edges, to create continuous pedestrian connections, and integrate pedestrian travel with other modes of transportation.

The following are recommended guidelines for new development in the flexible use areas. Not all of these recommendations will be applicable to every site, for instance smaller sites in the Flexible Use areas and sites in the REC will not be able to comply with all of the standards; however, flexible use developments should comply with any applicable standard in order to promote pedestrian-oriented development in the flexible use areas.

1. **Building Location**
   Buildings should be located on a site such that they relate to an appropriate feature on or adjacent to the site. Appropriate features include perimeter thoroughfares or interior streets, intersections between interior streets and perimeter thoroughfares, public located on the site, or other on-site amenities. Buildings should not be located such that they are isolated in a field of parking.

   a. For small flexible use projects consisting of one building or without a system of internal streets, the buildings should be located consistent with a permitted frontage type for the flexible use district in which the project is located.

   b. For larger flexible use projects incorporating a system of interior streets, all buildings should front on a street and have a minimum setback of 0 feet and a maximum setback of 15 feet.

2. Building Height

Building height is a key factor in determining the character of a development, as well as creating a sense of enclosure along streets. The following is a summary of the maximum building height permitted in each of the flexible use areas:

a. Flexible Use 1. Buildings should not exceed 2 stories or 30 feet in height in Flexible Use 1 area.

b. Flexible Use 2. Buildings in the Flexible Use 2 area generally should not exceed 2 stories or 30 feet in height, however, buildings up to 3 stories or 40 feet in height may be appropriate on sites in a Flexible Use 2 area that has frontage on Rochester Road. Buildings that exceed 2 stories or 30 feet in height should be buffered from adjacent single family development by lower transitional buildings, buffering landscaping, or other site design elements.

c. Flexible Use 3. Buildings in the Flexible Use 3 area generally should not exceed 3 stories or 40 feet in height. Higher buildings may be appropriate in certain locations on Rochester Road, provided that buildings exceeding 3 stories or 40 feet in height are buffered from adjacent single-family development by lower transitional buildings, buffering landscaping, or other site design elements.

d. Regional Employment Center. Building height in the Regional Employment Center (REC) may be up to 6 stories or 80 feet in height. The tallest buildings in the REC should be located at the interior of the flexible use area, close to M-59. Building height should transition downward extending out from the center of the REC. In particular, buildings located within 500 feet of the perimeter of the REC should not exceed 2 stories or 35 feet in height stories to ensure compatibility with residential land uses located around the edge of the REC.

e. Minimum Height. Buildings in a flexible use development should appear taller than one story. While multiple-story buildings are not required, single-story buildings should have a minimum height of 16 feet and have the appearance of being taller than one story to achieve the necessary enclosure ratio (see below).

3. Interior Streets

The interior circulation system in larger flexible use developments should be designed to function as a street system. Interior drive aisles should be designed to look and function as streets, and not as parking lot aisles. Accordingly, streets must accommodate all modes of transportation – pedestrian, non-motorized, and cars. For smaller flexible use developments that are not large enough to properly create a block system defined by streets, as many of the following concepts should be incorporated as is appropriate.

a. Design. Flexible use areas should include two types of street – local streets and spine streets. Local streets are designed to serve local access needs in a mixed-use development while spine streets are intended to provide access into a flexible use area from a perimeter thoroughfare.

Local streets in flexible use areas should generally have 2 travel lanes (with a center turn lane where necessary) and parking on both sides of the street.

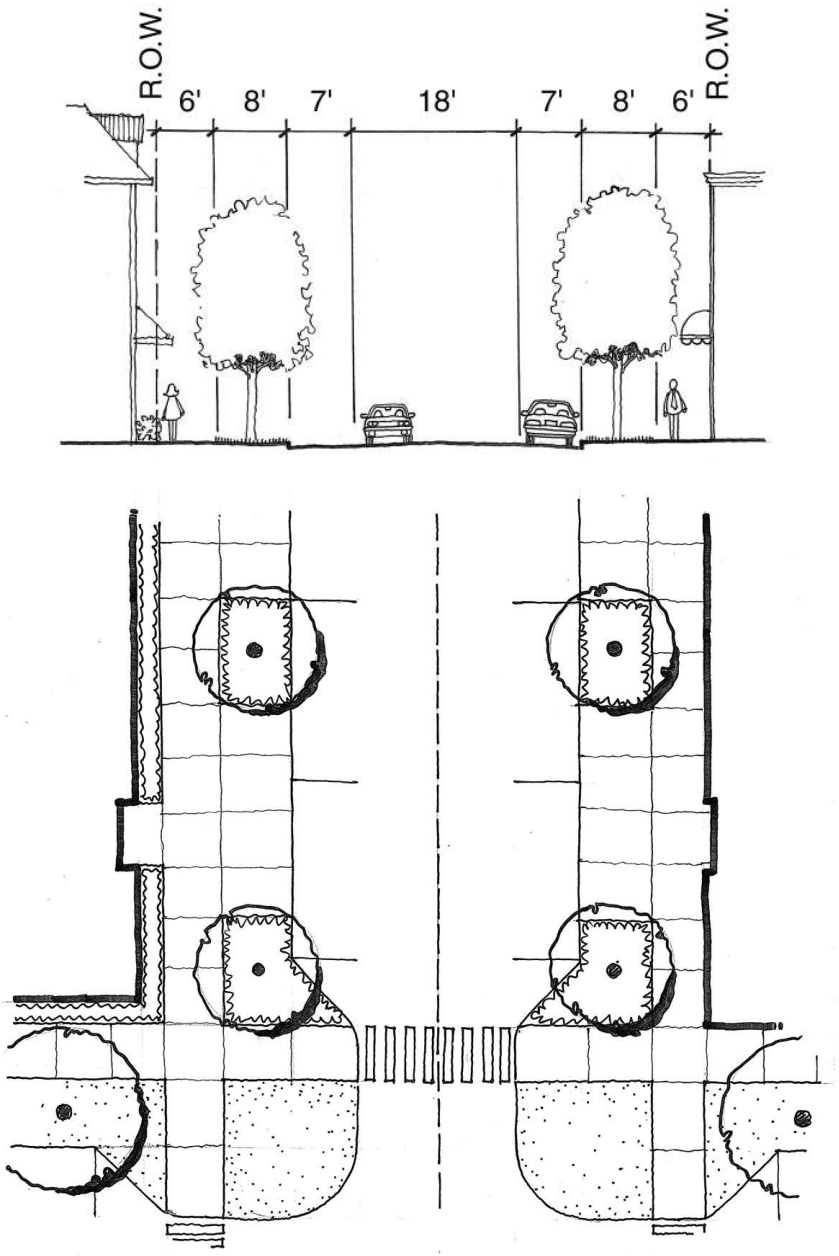
Spine streets are appropriate for development in the Flexible Use 3 and Regional Employment Center flexible use areas. Spine streets are intended to clearly identify to the driver that they have entered a unique and identifiable area. Spine streets may have up to 4 travel lanes with optional on-street parking and may be designed as a boulevard. Spine streets in a mixed-use development should have buildings fronting along at least 75% of the length of a street.

The guidelines for both local and spine streets are summarized in Table 7.4 and the illustrations on the following pages.

Table 7.4
Internal Street Standards

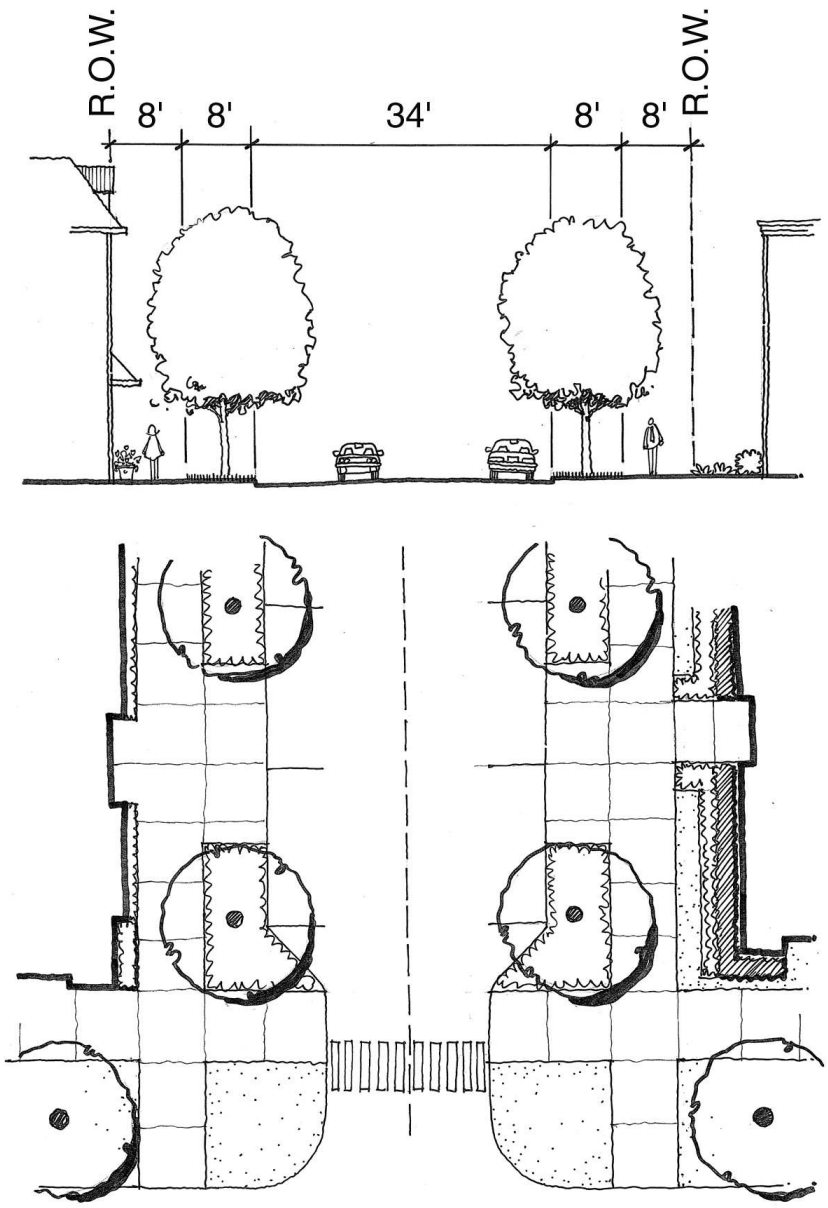
Standard	Local Street	Spine Street	Spine Street (Boulevard)
Right-of-Way/Easement	60 feet	66 feet	90 feet
Pavement Width	32 feet	34 feet	19 feet (each side)
Boulevard Island Width			20 feet
Travel Lanes (with on-street parking)	2	2	2
Travel Lanes (without on-street parking)		2-4	2-4
On-Street Parking	Both Sides	Optional	Optional
Tree Lawn Width [1]	8 feet	8 feet	8 feet
Sidewalk Width	6 feet	8 feet	8 feet

1. The tree lawn may be replaced by an extended width sidewalk with tree grates provided for street tree plantings.



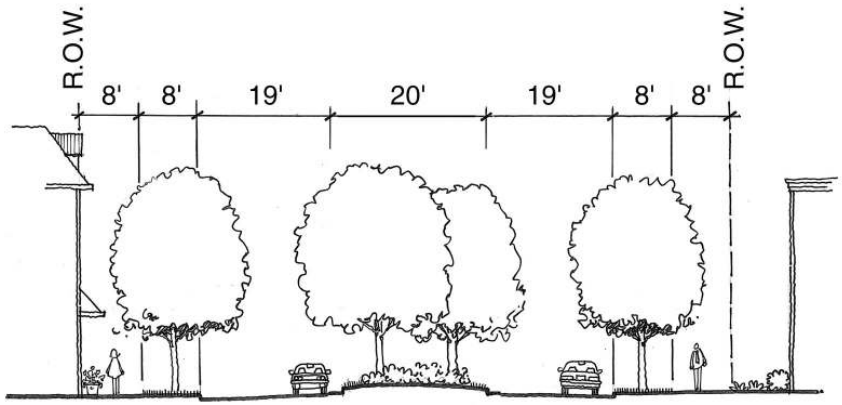
LOCAL STREET

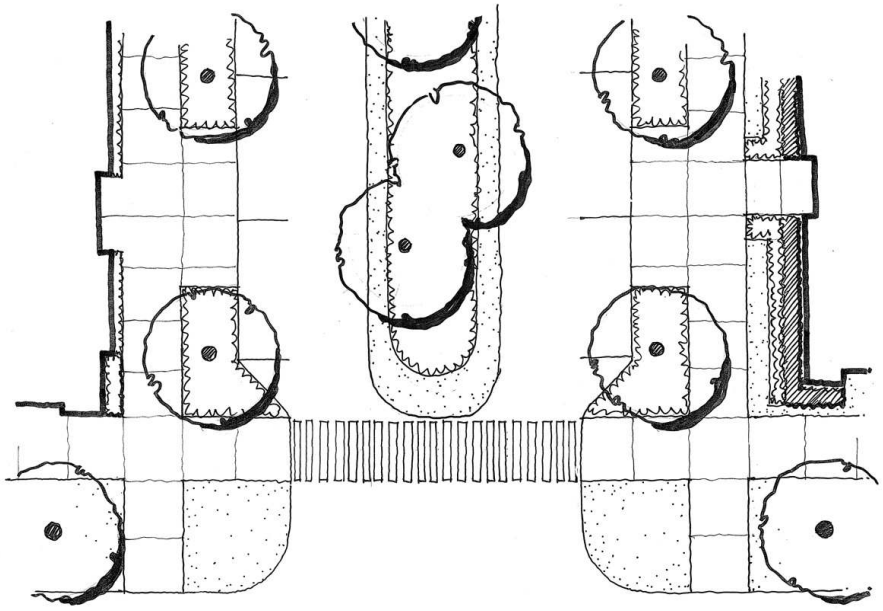
- 60 foot wide right-of-way/easement
- 32-foot wide pavement
- 2 travel lanes
- Parking on both sides of the street
- 6-foot wide sidewalk with 8-foot wide planting strip or 12 foot wide sidewalk with tree grates and a 2-foot wide verge at back of curb
- Provide pedestrian "bump-outs" at corners to facilitate safe pedestrian travel



SPINE STREET

- 66 foot wide right-of-way/easement
- 34-foot wide pavement
- 2 travel lanes with on street parking on both sides of the street OR
- 4 travel lanes with no on-street parking permitted
- 8-foot wide sidewalk with 8-foot wide planting strip or 14 foot wide sidewalk with tree grates and a 2-foot wide verge at back of curb
- Provide pedestrian "bump-outs" at corners to facilitate safe pedestrian travel





BOULEVARD

- 90 foot wide right-of-way/easement
- 19-foot wide pavement for each direcion
- 2 travel lanes with on street parking on both sides of the street OR
- 4 travel lanes with no on-street parking permitted
- 20 foot wide median planted with canopy trees
- 8-foot wide sidewalk with 8-foot wide planting strip or 14 foot wide sidewalk with tree grates and a 2-foot wide verge at back of curb
- Provide pedestrian "bump-outs" at corners to facilitate safe pedestrian travel

b. Blocks. Larger flexible use developments including a number of buildings should be designed with a pattern of interconnecting blocks and streets. Each block face should range from 200 to 600 feet in length. A block is defined as land bounded by streets or other site improvements such as parks. A block may contain buildings, parking, or other site improvements. See Figure 7.1 at right.

c. Enclosure. The Enclosure Ratio refers to the ratio of building height to spaces in front of the building. Much like walls form a room, buildings serve to form streets. The feeling of enclosure generated by the height-width ratio of a space is related to the physiology of the human eye. If the width of a public space is such that the cone of vision encompasses less street walls than the opening to the sky, then the degree of spatial enclosure is slight. As a general rule, the tighter the ratio, the stronger the sense of place. Spatial enclosure is particularly important for shopping streets, which must compete with malls that provide very effective spatial definition.

When a development has a system of internal streets, the enclosure ratio should not exceed 1:6 (height:width), with enclosure ratios between 1:4 and 1:1 considered optimal. In the illustration at right the buildings framing the road have a height of 25 feet and are spaced 75 feet apart for an enclosure ratio of 25:75 or 1:3. See Figure 7.2, at right.

d. Connectivity. Flexible use developments should provide for street connections within the development and to existing or potential streets on adjacent parcels. Where it is necessary to prevent cut-through traffic from entering residential areas, street alignments should be discontinuous and traffic calming improvements utilized.

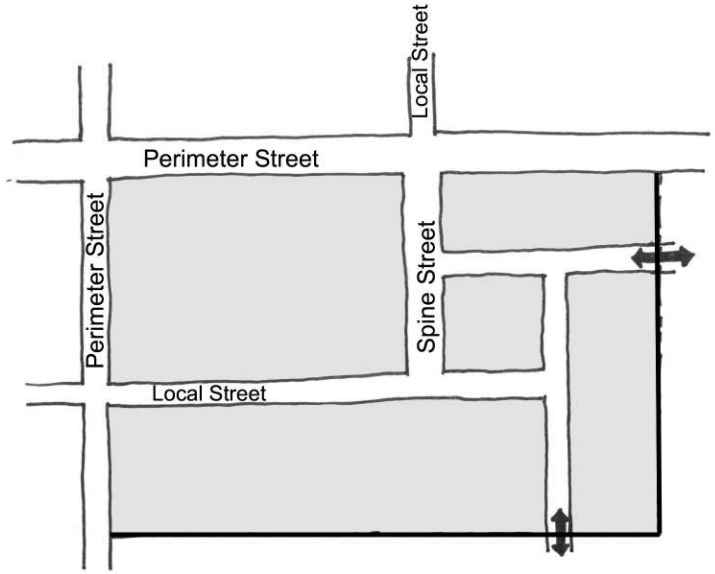


Figure 7.1 – Block Pattern

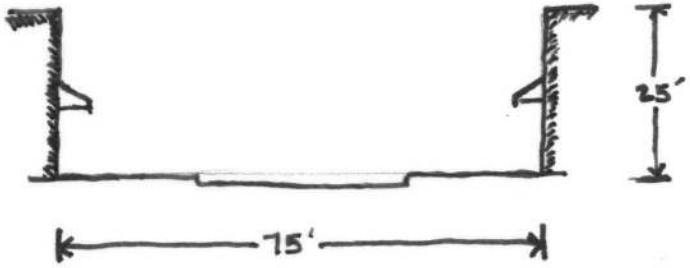


Figure 7.2 – Street Enclosure

e. Landscaping. Street trees should be provided along all interior streets and in boulevard islands on boulevard streets. Ample street trees should be provide;, typically one tree should be planted for each 30 or 35 lineal feet along each side of the interior street.

f. Ownership. Internal streets may be public or private. If private streets are proposed, cross access easements should be provided to ensure the continuation of the street pattern onto adjacent parcels.

4. Architecture and Building Design

These architecture standards are included to ensure that buildings incorporate a minimum level of design. It is not the intent of these guidelines to achieve a unified architectural theme in the City, or to dictate architectural choices in a development. These guidelines are intended to be flexible, and to permit a wide range of architectural themes and choices that incorporate quality design and materials.

a. Entrances. Buildings should be designed with at least one pedestrian entrance facing a perimeter or internal street, or a pedestrian walkway connected to a public sidewalk. When a building has frontage on more than one street, it should have an entrance on each frontage or at the corner of the building.

b. Building Height. Buildings in a flexible use development should appear taller than one story. While multiple-story buildings are not required, single-story buildings should have the appearance of being taller than one story to achieve the necessary enclosure ratio.

c. Articulation. Long stretches of unarticulated wall are not permitted. Projections, recesses and reveals with a minimum change of plane of 6 inches should be provided at regular intervals along the building frontage. Human scale detailing such as reveals, belt courses, recessed windows or doors, color or textural differences, or strongly expressed mullions are also encouraged.

Figure 7.3 - 2-Story Building With Façade Articulation and a Defined First Floor

Figure 7.4 - 4-Story Building With Façade Articulation and a Defined First Floor

d. Visual Interest. New buildings should create visual interest in ways that are compatible with the architectural character of the surrounding area. This may be accomplished through the use of rooflines, materials, colors, windows, or other architectural details.

e. Roofline. A well-defined cornice or fascia should be used to create a strong roofline, which visually "caps" the building, gives the facade a finished appearance, and helps to unify buildings within the block.

f. Blank Building Facades. Monotony of design, including long and blank building facades should be avoided. Single story buildings with high rooflines should include vertical elements and design details on the upper portion of the façade. See Figure 7.5 at right for an example of an articulated false upper façade.

g. First Floor Definition. First floors should be defined and articulated by architectural elements such as building materials and colors or horizontal elements to define the transition between the first and second floor.

h. Large Buildings. Large buildings in a flexible use area (single tenant buildings larger than 40,000 sq. ft.), such as big box retailers, department stores, or corporate offices should incorporate human scale design elements to minimize the mass and scale of the building. Incorporating liner stores along the façade of the building is encouraged where appropriate.

i. Mid-Block Pass-Throughs. A mid-block pedestrian pass-through should be provided when blocks are 400 feet or longer. These pass-throughs should be lighted and designed to be safe and visually interesting for pedestrians, and should be designed so they cannot be enclosed or locked. The pass-though should be used to connect separate buildings or to link parking areas to the front of buildings.

Figure 7.5 – Articulated Upper Facade

5. **Pedestrian Circulation**
   Flexible use developments should provide an on-site system of pedestrian walkways, sidewalks, and bike paths that provide continuous access to all land uses within a development and to land uses on adjacent properties. Sidewalks along internal streets should have a minimum width of 6 feet and should connect to the 8' wide multi-use pathway system required along perimeter thoroughfares.

   Sidewalks or dedicated pedestrian pathways should be provided in parking areas to create connections to the overall pedestrian circulation system on the site.

6. **Public and Civic Space**
   An attractive public realm is a fundamental ingredient in the success of a mixed-use development. Open air and semi-enclosed public gathering spaces can act as central organizing elements in a flexible use center. They can also help shape the relationship between different uses and provide focal points and anchors for pedestrian activity. On-site amenities provide a unique character and image for a flexible use development, making it a special place in the community, and not just a development project.

   Flexible use developments should incorporate 2 or more of the following public elements:

   a. Plaza. Plazas incorporating seating areas and other amenities to support these spaces as gathering areas. Plazas should have a minimum dimension (width or depth) of 10 feet and a minimum area of 300 feet, and should be surfaced with pavers or textured concrete.

   b. Landscaped Mini-Parks. Small park areas including attractive landscaping and having a minimum dimension of 10 feet (width or depth) and a minimum area of 650 feet. The park area should be

Figure 7.6 - Plaza With Seating

Figure 7.7 - Landscaped Mini-Park

accessible, and should not include an overabundance of evergreen landscaping that renders the park area unusable to pedestrians.

c. Water Features. Water features such as lakes, ponds, or fountains, provided that pedestrians may easily access the feature and seating areas around the feature. Stormwater detention ponds should not be considered a water feature unless they are designed as an amenity integrated into the development and a detailed maintenance program is prepared for their continuing maintenance.

d. Public Art. Outdoor public art that is visible from an adjacent public sidewalk or street and easily accessed for viewing or enjoyment by pedestrians.

e. Other Features. Any other well-designed area and/or focal feature that serves as a gathering place for employees, residents, customers, and visitors, is consistent with the intent of this section and that substantially enhances the development.

7. Parking

Parking presents one of the most difficult challenges for the design of a flexible use development. Surface parking requirements can make parking the largest user of land in a mixed-use center; with significant impacts the overall layout and image of the center. Parking placement, quantity, and access must be convenient and meet the needs of all of the uses on the site; however, it must not dominate the design of the center.

The purpose of the parking requirements is to ensure that the location and layout of off-street parking areas balance the needs of pedestrians with the use of the automobile on the site. The location and layout of parking areas should support the pedestrian environment while providing efficient and convenient automobile access and circulation.

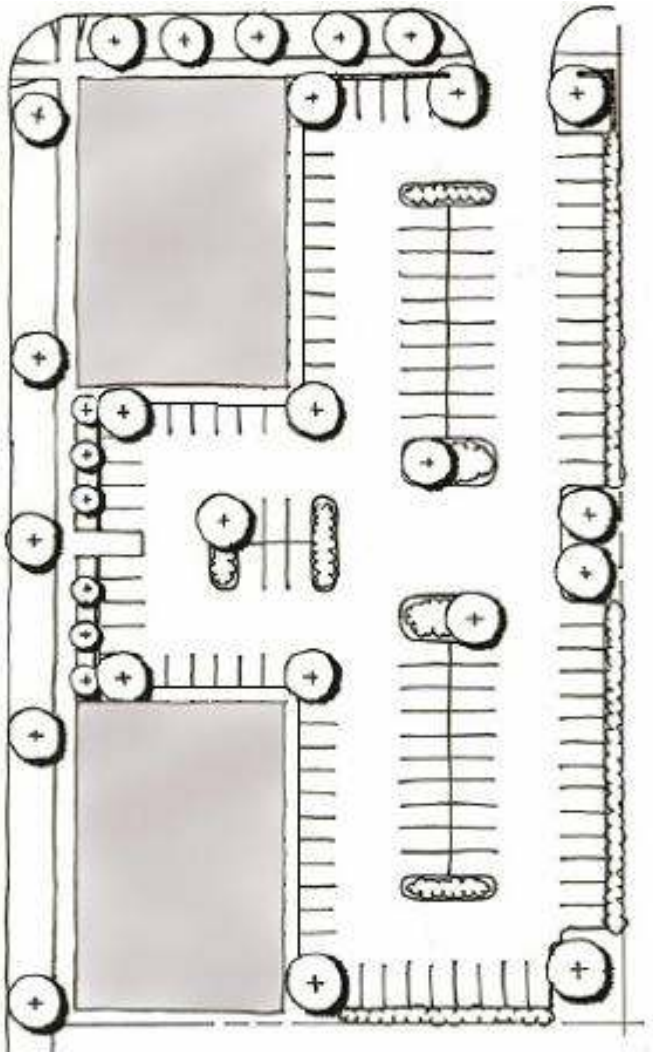


Figure 7.8 - Typical Off-Street Parking Layout

a. Location. Parking must be located at the side, to the rear, or at the face of a building that does not front along a street. In no case should parking be located between a building and an adjacent internal street frontage. In some cases parking is permitted between a building and a perimeter road (see the perimeter road frontage types, above).

b. Parking Adjacent to an Internal Street. Parking areas should be located within a designated block. For block faces that have parking facing an internal street whether the parking lot is located in between buildings or if the entire block consists of parking, a parking lot street frontage should be provided (see item c, below).

c. Parking Lot Street Frontage. A parking lot street frontage should provide a separation between the edge of the street pavement and the edge of the parking lot pavement. The frontage should consist of either 1) a minimum separation of 14 feet from the edge of the street pavement to the edge of the parking lot pavement including a minimum 6-foot wide sidewalk and a minimum 8 foot wide green space planted with street trees or 2) a minimum 10 foot wide sidewalk incorporating trees planted in tree grates. A minimum of one street tree should be provided for each 30 lineal feet of frontage.

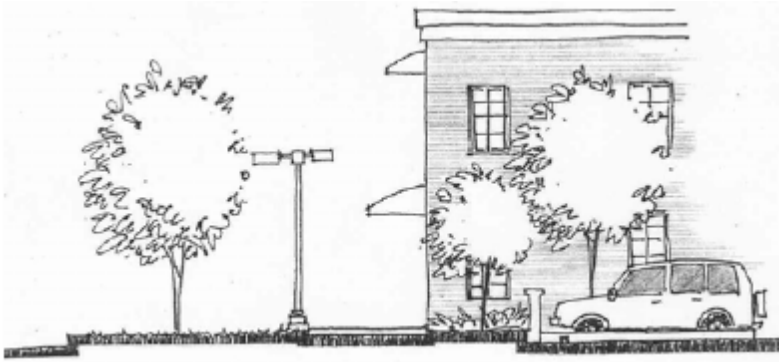


Figure 7.9 - Parking Lot Street Frontage

Regardless of which frontage is used, shrubs and/or a low decorative wall that will provide an opaque screening effect to a height of 42 inches (3.5 feet) above the sidewalk adjacent to the parking area should be provided between the sidewalk and the edge of the parking lot pavement to buffer the view of parked cars from the street.

d. Pedestrian Walkways. In order to make surface parking areas more pedestrian friendly, a pedestrian walkway should be provided extending from the furthest row of parking to a building entrance or

a sidewalk leading to a building entrance. The walkway should be located in a curbed and landscaped area to define the walkway and separate it from vehicle use and travel areas. One such walkway should be provided every 400 feet, measured perpendicular to the walkway.

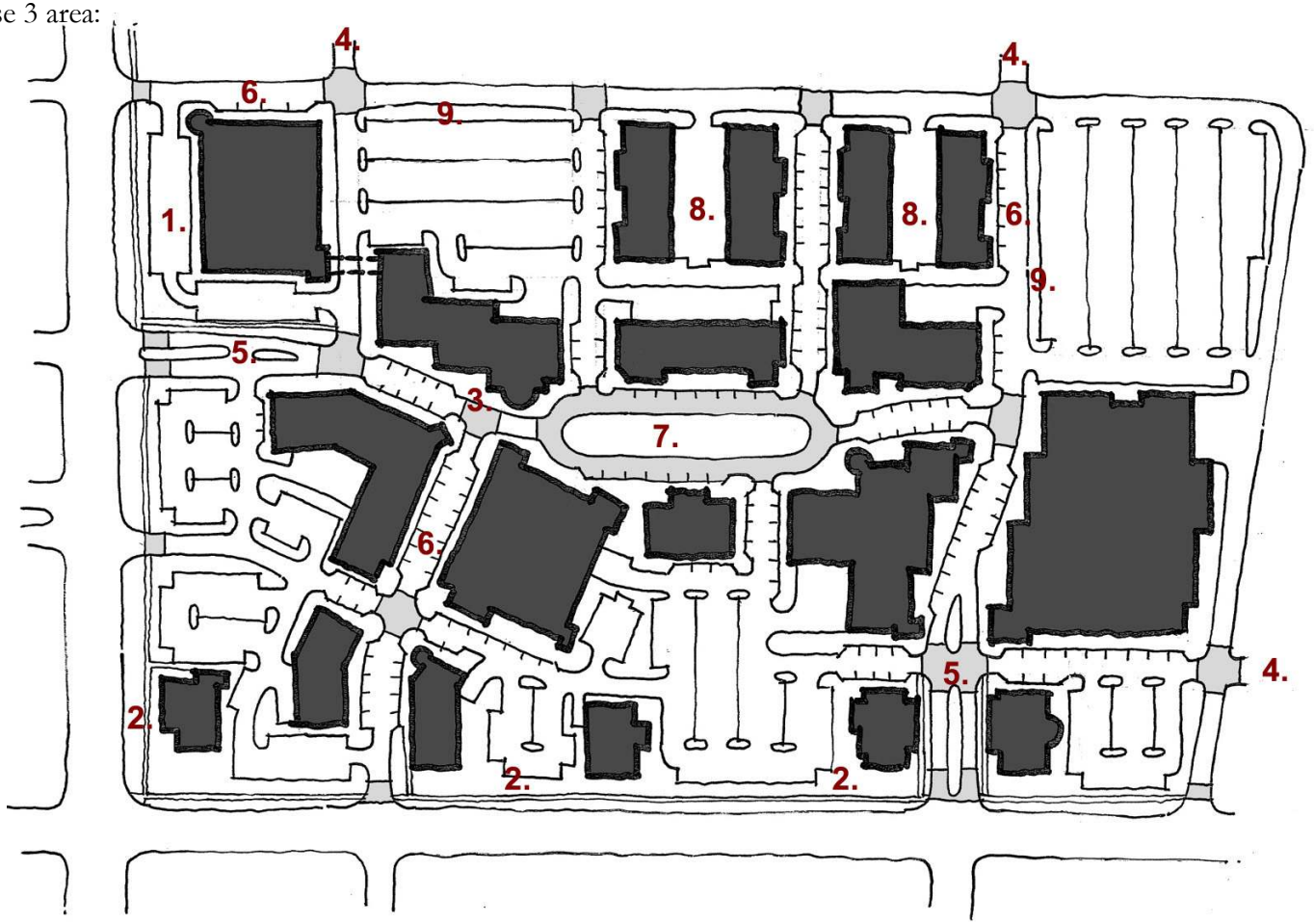
e. Parking Lot Landscaping. Landscaping should be provided in parking lots to break up expanses of paved areas, reduce the heat island effect created by parked cars and paved surface, and provide a more pedestrian-friendly environment. Trees should be planted in island planters, along pedestrian walkways, or along the perimeter of a parking area. All parking aisles should terminate with a landscaped island. If more than 20 parking spaces are located in a parking aisle, a landscape island or islands should be provided in the middle of the parking row or a landscaped median island provided in between facing parking rows.

f. Parking Structures. Where feasible, parking structures are encouraged to reduce the amount of lot coverage dedicated towards parking. In order to ensure that parking structures enhance the overall appearance of the project, parking structures should be decorative in nature. Flat or unarticulated walls are prohibited; rather, parking structures should be similar in appearance, design and scale to adjacent buildings. The ground floor of parking structures that are adjacent to a street should be designed to incorporate uses permitted in the flexible use area.

Figure 7.10 - Parking Structure with Decorative Facade

SITE DEVELOPMENT CONCEPT

The following sketch is an example of how the design concepts presented in this section can be applied to a real-world site in a Flexible Use 3 area:



KEY

1. Frontage Type C
2. Frontage Type B
3. Buildings Fronting on an Internal Street
4. Connections to Adjacent Parcels
5. Spine Street
6. Local Street
7. Park/Amenity Area
8. Attached Single Family
9. Parking Lot Street Frontage

8. Implementation

The Master Land Use Plan represents a vision for the future of Rochester Hills – a vision to preserve and enhance the best characteristics of the City while making the most of opportunities that come with new development, and is a guide to assist decision-makers and stakeholders in making decisions that are consistent with the overall vision. The Plan in itself is a vision and provides goals and objectives that should be considered in daily decision-making. Successful implementation of the Plan will be the result of actions taken by elected and appointed officials, City staff, public sector agencies, and private citizens and organizations.

This chapter identifies and describes actions and tools available to implement the vision created in this Master Land Use Plan. Broadly stated, the Plan will be implemented through:

- City regulations and ordinances.
- Public investments and other economic development measures.
- Continuous Planning actions by the City Council, Planning Commission, and other appointed boards.

Finally, this chapter concludes with a chart summarizing the recommended actions or strategies, and the entities primarily responsible for implementing each action or strategy.

Zoning and Regulation

Land development review and regulation is a key implementation tool to achieve the vision of the Master Plan. In order to realize that vision, the City must ensure that ordinances and regulations permit the type and style of development recommended by the Master Plan.

A comprehensive review of the City's ordinances, particularly the Zoning Ordinance and the Subdivision Control Ordinance, is necessary to determine the scope of amendments necessary to achieve the goals of the Master Plan.

1. **Zoning Ordinance amendments** are necessary to permit development in the Regional Employment Center, Flexible Use areas, Office areas, and Mixed Residential areas consistent with the Master Plan's recommendations. A variety of zoning tools exist to achieve that vision.

    a. *Create New Regional Employment Center Zoning District.* A new Regional Employment Center zoning district should be created to replace the existing zoning districts in the REC area. The new zoning district should be based upon the land use and design recommendations presented in Chapter 7 of this Plan, and should include regulations to protect the office viewshed corridor along M-59. Uses permitted in the REC are anticipated to include office, high-technology, light industrial and support uses such as retail within multi-tenant buildings. Mixed use developments allowing a combination of uses should be encouraged, and restrictions on office space in existing buildings should be eased, provided that adequate parking is provided. In the case of existing technology parks, setback requirements should be eased to allow for the

expansion of buildings and/or parking areas while maintaining landscaped street buffers.

b. *Create Overlay Districts.* Overlay districts that permit the landowner to develop the property according to the new zoning standards in the overlay district or the standards of the existing underlying zoning district should be created to implement the recommendations of the Future Land Use Plan. Overlay districts should be created for Mixed Residential areas, the three Business/Flexible Use areas, and the Landfill Planning Area.

   Chapter 7 includes recommended design guidelines for development in the three Flexible Use areas. These design guidelines should form the basis for the Flexible Use overlay zoning districts.

c. *Planned Unit Development.* The City has an existing Planned Unit Development option in the Zoning Ordinance. If the City wishes to continue to use this zoning tool, the PUD ordinance could be amended to more easily accommodate the types of commercial and mixed-use development anticipated on existing commercial sites and land in the Regional Employment Center.

   Pros: This is an existing tool with which the City has familiarity.

   Cons: Requires a time consuming review process; does not provide the same flexibility to accommodate a change of uses within a development after it is built because each development is governed by a contract between the developer and the City.

d. *Conditional Rezoning.* Public Act 579 of 2004 allows for the conditional rezoning of property based upon a proposal presented by an applicant. This approach permits the City to approve a rezoning contingent upon the developer fulfilling conditions attached to the rezoning approval. This approach allows flexibility in site design, and may also ensure that undesirable uses will not occur on a particular site if rezoned. This tool should not be used as the sole implementation method for flexible use areas, but it may be appropriate for difficult sites where a rezoning might be appropriate if properly designed. The use of conditional rezoning would assure the City that certain design and use standards would be met in the new development if rezoned.

   Pros: Provides the City assurances on what will (or won't) be built on a site; is appropriate for difficult sites where inappropriate uses would negatively impact surrounding uses.

   Cons: Provides the least amount of flexibility to accommodate expansion or changes in use once a development is built.

2. **Revise the subdivision control ordinance and condominium ordinance** to include design standards for smaller residential infill parcels. These revisions should promote connectivity between parcels to prevent isolated and unconnected developments consisting of a single cul-

de-sac from developing on long, narrow parcels located along major roads in the City.

3. **Change Zoning Designations (rezone)** on parcels where necessary to implement the land uses recommended by this plan. Rezonings will be necessary to implement the new Regional Employment Center zoning district which will replace the existing zoning districts in that area. Adoption of the overlay zoning districts will not require any rezonings, but the new zoning districts will have to be adopted following the procedures set forth in P.A. 110 of 2006 (the Michigan Zoning Enabling Act).

4. **Upgrade Existing Zoning Regulations.** Raise the minimum landscaping, building design, parking, and other similar zoning requirements. Raising the minimum standards applicable to conventional development in existing zoning districts will improve the appearance of development in the City, and will help ensure that development that follows the conventional zoning standards will be compatible with development that uses the flexible use overlay standards.

Natural Features

The following is summary of recommended actions identified in Chapter 4.

1. **Update the City Floodplain Map** when revised FEMA floodplain maps are available.

2. **Adopt a steep slope ordinance**. A steep slope ordinance will regulate development on or near steep slopes, helping to protect sensitive natural features in the City such as the Clinton River.

3. **Clinton River riverbank restoration and protection**. Work with appropriate agencies to restore damaged riverbank areas of the Clinton River, and to protect undamaged areas.

4. **Establish protected woodland areas** based on the Woodland Map and amend the Tree Conservation Ordinance to include the Woodland Map and provisions for the protection of official woodland areas.

5. **Develop and enforce a comprehensive stormwater management program** to implement best management practices (BMPs). The stormwater BMPs should minimize the impact of development on water quality, limit the rate and volume of stormwater discharge to pre-development levels, establish in-stream maximum flow targets to minimize stream bank erosion and maintain healthy aquatic populations, and require long-term maintenance standards for stormwater management systems to retain water quality protection over time.

6. **Require or encourage LEED certification** for new or renovated buildings in the City. The benefits of green development are described on page 7.9. LEED standards provide a framework for green development, and are the most fully-developed comprehensive certification system for energy efficient and environmentally friendly construction.

   The LEED standards provide a complete framework for assessing building performance and meeting sustainability

goals. Based on well-founded scientific standards, LEED emphasizes state of the art strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. LEED recognizes achievements and promotes expertise in green building through a comprehensive system offering project certification, professional accreditation, training and practical resources. A wide range of LEED systems have been developed, with each system containing specific regulations applicable to different types of development. In order to promote energy efficient and environmentally friendly construction in the City, the following actions should be taken:

- **Require all new or renovated City buildings to be LEED certified.** Requiring LEED certification for new or renovated municipal and public buildings when the value of improvements are above a certain threshold level will provide environmental leadership and demonstrate the feasibility of green construction to the private development community and residents of the City.

- **Encourage LEED-NC or LEED-EB certification for non-residential buildings.** The City should raise awareness of the benefits of green development and establish incentives for private interests to achieve LEED certified status when constructing or renovating non-residential buildings.

- **Encourage LEED-H certification for new single family homes.** The City should implement a program to raise awareness of the benefits of energy efficient design and construction in single family homes, and encourage LEED-H certification for new or renovated single family homes in the City.

Economic Development

A primary focus of this plan is the evolution and reuse of the commercial districts of the City. Commercial land uses typically have a shorter life-cycle than other land uses, and are more sensitive to shifts in market trends and consumer demographics. Most first-generation suburban commercial development is relatively low-intensity, with single uses and low-cost buildings located on a site. This pattern of commercial development is ultimately an inefficient use of land, and also increases reliance on automobile trips exacerbating traffic problems in the City.

A number of economic development tools are available to assist the City in realizing the vision of creating more dynamic mixed-use places where single-use commercial areas are currently located. These economic development tools allow the City to secure financing, provide incentives for, or partner with private interests to facilitate the redevelopment of aging and/or obsolete commercial areas or improvements to maintain stable commercial areas.

1. **Establish an Economic Development Committee.** The City should establish an Economic Development Committee to evaluate and prioritize economic development activities. The Committee should include representatives from all parties interested in economic development, potentially including members from City Council, Planning Commission, City Staff, and the business community. The Committee should investigate

the applicability of each of the available economic development tools to various districts and corridors in the City, including the Olde Towne area, the Rochester Road and Auburn Road corridors, the Landfill Planning Area, and the Regional Employment Center.

2. **Investigate Continued Relevance of Olde Towne Corridor Study.** A corridor study of the Olde Towne area was completed as part of the previous master plan update in 1999-2000. The existing corridor study should be evaluated to determine the continued relevance of the recommendations of that study, and, if it is still relevant, to create an implementation plan.

3. **Promote the Redevelopment of Key Corridors and Commercial Areas.** The City should proactively apply the economic development tools summarized beginning on page 8.6 to existing commercial corridors and districts to maintain those areas in a relevant and competitive state.

4. **Develop M-59 as a Premier Office Location.** Create a redevelopment plan identifying the boundaries of the office corridor in the Regional Employment Center. The redevelopment plan should also consider interior road access and strategies to promote these areas to developers.

5. **Address Parking Issues in the Regional Employment Center.** Suitable areas for parking structures to ease crowded parking conditions should be identified. Funding mechanisms should also be evaluated, such as special assessment districts, LDFA or Corridor Improvement Authority districts or other forms of tax increment financing.

6. **Establish a Business Attraction Program.** The City should develop a marketing plan focused on the M-59 office corridor on the Regional Employment Center to attract appropriate companies seeking a corporate presence. The marketing plan should include the following elements:

   - The establishment of an economic development brand,
   - A promotional brochure that features the office corridor
   - Attendance at trade shows both in and out of state where development professionals, real estate investors and corporate users are likely to be.
   - Expansion of the CProperty[tm] database to list redevelopment areas.
   - Continued promotion of the Great Lakes Interchange
   - Advertisement in trade publications that target site selectors and corporate executives
   - Annual real estate focus groups as a means of communicating the City's progress in developing the REC and changes to regulations and policies

7. **Maintain a Business Retention Program.** The City should develop a business retention program consisting of the following components:

   - An ambassador's program to acknowledge executives and real estate agents who promote the City

- A Beautification Recognition Program to promote maintenance of properties and landscaping

- Ongoing communications with business executives through the continuation of the Rochester Hills Business Report and email notices of new programs or services

- Judicious use of incentives to support job creation and retention and/or investment and reinvestment in existing or new facilities

Economic Development Tools

The following economic development tools are available:

- **Downtown Development Authority** (Public Act 197 of 1975). A Downtown Development Authority (DDA) is a non-profit development corporation which exists for the purpose of promoting a desirable environment for businesses and residents, and implementing economic development projects. A variety of financing techniques are available to DDAs, including bond issues, Tax Increment Financing (TIF)[1], and public and private contributions.

The DDA is a tool that has been used by numerous communities of all shapes and sizes in the State of Michigan. Many suburban communities create corridor DDAs along the primary commercial street, such as Rochester Road.

In order to establish a DDA, the City must demonstrate evidence of stagnant or declining property values within the boundary of the proposed DDA.

- **Corridor Improvement Authority** (Public Act 280 of 2005). This recently passed legislation establishes a new method of improving older commercial corridors without establishing a DDA. The Corridor Improvement Authority Act allows local governments to create one or more Corridor Improvement Authorities (CIA) to address established, deteriorating commercial corridors located outside their downtown areas. The primary benefit of this tool is to provide local governments with the option of using TIF for improvements in the district(s), and to undertake a wide range of activities to promote economic development and redevelopment in commercial areas.

  In order to be eligible to create a CIA, the development area must have a minimum size of 5 acres, consist of at least 50% commercial property, and be zoned to allow mixed-uses, including "high-density" residential use. A municipality must also expedite the local permitted and inspection process in the development area and promote walkable nonmotorized interconnections throughout the development area.

[1] Tax Increment Financing is a funding method for DDAs and BRAs. When a TIF district is established, the total state equalized value for property in the district is recorded. Every year thereafter, the property tax revenue generated by any increase in the total state equalized value is captured by the TIF. In this manner, the TIF is funded only by increases in property values and the City 's general fund is not affected by the tax capture of the TIF.

The Rochester Road corridor would be a natural place to create a CIA, as the Future Land Use portion of this Plan calls for mixed-uses and walkable nonmotorized connections in the mixed use areas. Therefore, the Master Plan already complies with the requirements of Public Act 280 of 2005.

The advantage of this act is that it allows more than one CIA to be established in a community, in addition to the one DDA that a community is typically permitted to establish.

- **Brownfield Redevelopment Authority** (Public Acts 381, 382, and 383 of 1996). Communities are authorized to create one or more Brownfield Redevelopment Authorities (BRA) in the community. BRAs may be used to finance the cleanup and reuse of contaminated property. Costs that can be funded by a BRA include the demolition of buildings necessary to remove hazardous substances and new construction if needed to protect against exposure to hazardous substances that are to remain.

  A BRA may use a TIF to pay back a developer for activities needed to facilitate the redevelopment of the site. Once the developer has been paid back for initial site remediation, the additional captured property taxes may go into a local site remediation fund to pay for cleanup and rehabilitation activities on other brownfield sites in the community.

  An important feature of a BRA is the ability to capture state and local school taxes, but only from the taxes paid by the user of the redeveloped contaminated site. BRAs may also issue revenue and TIF bonds and notes or borrow from the MDEQ's Revitalization Loan Fund.

  The Landfill Planning Area is one location in Rochester Hills where a BRA would be useful in facilitating redevelopment of contaminated sites.

- **Principal Shopping District/Business Improvement District** (Public Act 120 of 1961). This Act provides for the establishment of principal shopping districts and for the undertaking of certain activities within these districts. Municipalities are permitted to complete street and pedestrian improvements, acquire property for and construct parking facilities (including parking garages), along with other facilities that "serve the public interest."

  The municipality may also create a board for the management of certain ongoing activities, including various initiatives to promote economic development (i.e. market studies, public relations campaigns, and retail and institutional promotions). In addition, the maintenance, security, and operation of the principal shopping district may be carried out through this board. For ease of description, this board is often referred to as a Downtown Management Board (DMB) and the area it represents as the Principal Shopping District (PSD).

  The DMB is composed of a number of members determined by he City at the time of authorization with a majority of the members being nominees of individual businesses within the PDS. One member is

a representative of the adjoining residential neighborhoods and one member is a representative of City government. All board members are appointed by the chief executive officer of the City with the concurrence of the governing body.

The DMB may be funded through grants and contributions and may also use the proceeds of special assessment levied by the governing body on property within the PSD specifically for maintenance, security, and operation purposes. All assessments are levied in accordance with the City's special assessment policies and procedures.

PSDs are a useful tool for addressing issues such as parking structure construction and operation by shifting responsibility and accountability to a single organization. The organization is business driven, yet closely linked to the City through the appointment process and funding arrangements. It is therefore an organizational expression of the partnership between the City and business interests. Its powers to conduct cooperative advertising and promotion, public relations, maintenance, and general operations are broad enough to address many of the previous strategies.

PSD's do not, however, possess the authority to conduct broad redevelopment or public infrastructure development activities. It also does not have access to a dedicated property tax millage or the ability to undertake TIF.

- **Commercial Rehabilitation Act** (Public Act 210 of 2005). The Commercial Rehabilitation Act enables local units of government to create one or more rehabilitation districts in which rehabilitated commercial property may receive property tax reductions for one to 10 years from the municipality (excluding personal property and the land upon which the rehabilitated facility is located).

  These tax reductions or abatements may be used to encourage redevelopment in the community; however, they do reduce the amount of tax revenues collected by the City. Therefore, this tool should be used judiciously.

- **Local Development Financing Authority** (Public Act 281 of 1986). A Local Development Financing Authority (LDFA) is intended to assist industrial development, to promote economic growth, and prevent unemployment. Eligible activities include the support of business investment in districts where the primary activity is the manufacture of goods or materials, agricultural processing, or high-tech activities such as product development, engineering, product testing, or research and development.

  A LDFA may use TIF, and only one LDFA may be created in the community. The Regional Employment Center would be a natural location in Rochester Hills to create a LDFA to assist in economic development.

Continuous Planning and Other Improvements

1. The Master Plan is not intended to be, and should not become a static document. For this reason, it is imperative that the Planning Commission periodically **review the Master Land Use Plan** to evaluate, and potentially update portions of it. The plan should be reviewed at least once every three to five years.

2. In order to qualify for State funding for parks and recreation improvements, the City must **review and update the Parks and Recreation Plan** at least once every 5 years.

3. This master plan proposes different types of land uses in areas that were previously strictly commercial, and also recommends design standards for how development should look from the road. In order to ensure that the proposed land use and design changes are consistent with the safe and efficient flow of traffic, and to address current issues and planned updates, the City should **update the Master Thoroughfare Plan.** The previous thoroughfare plan was adopted in 1999.

4. **Implement the Gateways Plan.** As noted on Page 7.9, the City has developed a comprehensive gateways plan. The Gateways plan must now be implemented by City Staff and the Planning Commission.

Implementation Summary Tables

This and the following pages contain tables summarizing the recommended actions and activities necessary to implement the Master Plan. The summary should be regularly referred to and updated as projects and actions are completed. Some of the tasks listed in the tables are one-time events (such as Zoning Ordinance amendments), while other tasks are on-going efforts (such as regularly reviewing the Master Plan to ensure that it still reflects the vision of the community.

ZONING ORDINANCE AMENDMENTS

Recommendation	Priority	Time Frame	Responsibility
Comprehensive review of existing Zoning Ordinance	High	6 months to 2 years	Planning Commission/City Council
Create zoning regulations to implement Mixed Residential, Regional Employment Center, and Office future land use designations.	High	6 months to 2 years	Planning Commission/City Council
Create Business/Flexible Use overlay districts, including design standards recommended in Chapter 7.	High	6 months to 2 years	Planning Commission/City Council
Create Estate Residential zoning district	High	6 months to 2 years	Planning Commission/City Council
Revise Subdivision Control Ordinance and condominium regulations for small infill sites	High	6 months to 2 years	Planning Commission/City Council
Upgrade minimum landscaping, parking, and other similar zoning standards for conventional development.	High	6 months to 2 years	Planning Commission/City Council
Rezone properties and adopt new overlay zoning districts according to the Future Land Use Plan (if necessary)	High	6 months to 2 years	Planning Commission/City Council
Include Future Land Use Considerations from Chapter 7 as criteria to be evaluated in a rezoning	High	6 months to 2 years	Planning Commission/City Council

NATURAL FEATURES and ENVIRONMENTAL CONSIDERATIONS

Recommendation	Priority	Time Frame	Responsibility
Clinton River riverbank restoration and protection	Medium	Ongoing	Planning Commission/City Staff
Update City floodplain map	Low	Ongoing	City Staff
Adopt a steep slope ordinance	Medium	1-2 years	Planning Commission/City Council
Amend Tree Conservation Ordinance to include Official Woodland regulations	Medium	1-2 years	Planning Commission/City Council
Develop and enforce a comprehensive storm water management program	Medium	1-2 years	Planning Commission/City Staff
Raise awareness of the benefits of green building standards among the development community, business owners, and residents of the City	High	6 months – one year	City Staff
Require LEED Certification for new or renovated municipal buildings	Medium	1-2 years	City Council/City Staff
Encourage LEED Certification for new or renovated commercial, office, multiple-family, and single-family buildings	Medium	1-2 years	City Council/City Staff

ECONOMIC DEVELOPMENT

Recommendation	Priority	Time Frame	Responsibility
Create Economic Development Committee	High	6 months – one year	City Council/City Staff
Implement Downtown Development Authority, Corridor Improvement Authority, or other appropriate financing mechanisms	Low	As Needed	City Council/City Staff
Review and evaluate Olde Towne corridor study for continued applicability	High	6 months – one year	Planning Commission/City Staff
Review needed infrastructure improvements in the Olde Towne area	Medium	1-2 years	City Staff
Develop M-59 as a premier office location	Medium	Ongoing	City Council/City Staff
Establish a business attraction program	Medium	Ongoing	City Council/City Staff
Maintain a business retention program	Medium	Ongoing	City Council/City Staff
Implement Downtown Development Authority, Corridor Improvement Authority, or other appropriate financing mechanisms	Low	As Needed	City Council/City Staff

HISTORIC DISTRICTS

Recommendation	Priority	Time Frame	Responsibility
Designate Historic and Cultural Resources	Low	As Needed	HDSC/City Staff
Raise public awareness of Historic Districts	Low	Ongoing	HDC/City Staff
Incorporate Historic Preservation into land use and zoning decisions	Low	Ongoing	Planning Commission/City Staff

CONTINUOUS PLANNING and OTHER IMPROVEMENTS

Recommendation	Priority	Time Frame	Responsibility
Review Master Land Use Plan and update if necessary	Low	Every 5 years	Planning Commission
Update Parks and Recreation Plan	Low	Every 5 years	City Staff
Update Master Thoroughfare Plan	Medium	1-2 years	City Staff
Review Natural Features Inventory and update if necessary	Low	Every 5 years	Planning Commission/City Staff
Implement the Comprehensive Gateway Plan	Low	Ongoing	Planning Commission/City Council
Review and Update Architectural Guidelines	Medium	1-2 years	Planning Commission/City Council

Community Planning Consultant

McKenna ASSOCIATES

INCORPORATED

BECAUSE TOMORROW MATTERS

235 E. Main Street, Suite 105
Northville, MI 48167
TEL 248.596.0920
FAX 248.596.0930

Phillip C. McKenna, PCP, AICP ..... President
John R. Jackson, AICP ..... Community Manager
Amy T. Chesnut, AICP ..... Project Manager
James C. Breuckman, AICP ..... Project Planner
Sabah Aboody-Keer ..... GIS Mapping
John Otwell ..... Graphic Support and Cover Design
Kacy Smith ..... Administrative Support