

Charter Township of Plymouth **MASTER PLAN FOR LAND USE**



ADOPTED BY THE TOWNSHIP ♦ May 2015

CHARTER TOWNSHIP OF PLYMOUTH, WAYNE COUNTY, MICHIGAN

Charter Township of Plymouth

MASTER PLAN FOR LAND USE

This document represents a complete update of the Charter Township of Plymouth Master Plan for Land Use, and shall hereby replace the following Master Plan documents:

- | | |
|------------------------------|--------------------------|
| ❖ Master Plan Base Document: | Adopted January 11, 1994 |
| ❖ Master Plan Amendment: | Adopted April 10, 1997 |
| ❖ Master Plan Amendment: | Adopted May 7, 2004 |
| ❖ Master Plan Amendment: | Adopted May 11, 2010 |

PREPARED BY:

The Charter Township of Plymouth Planning Commission
Jana Radtke, Community Development Director/Planner

Adopted by the Charter Township of Plymouth Planning Commission and distributed to the Board of Trustees for approval on: April 15, 2015



Dennis J. Cebulski, Planning Commission Chairman

Adopted by the Charter Township of Plymouth Board of Trustees on: May 19, 2015



Nancy C. Conzelman, Township Clerk

Acknowledgments

This extensive update to the Master Plan for Land Use is the result of over a year of study, and would not have been possible without the dedication and support of Township officials and staff. Representatives from Wayne County also contributed valuable information regarding the existing road network, which has been incorporated into the Master Plan for Land Use.

PLANNING COMMISSION

Kay Arnold

Kendra Barberena

Dennis Cebulski, Chairman

Keith Postell

William Pratt

Dennis Siedlaczek

Raymond Sturdy

BOARD OF TRUSTEES

Shannon Price, Supervisor

Nancy Conzelman, Clerk

Ron Edwards, Treasurer

Kay Arnold

Charles Curmi

Robert Doroshewitz

Michael Kelly

TOWNSHIP STAFF

Jana Radtke, Community Development Director/Planner

Contents

Introduction	1
Community Profile	3
❖ <i>Location</i>	3
❖ <i>Population Counts & Projections</i>	4
❖ <i>Educational Attainment</i>	9
❖ <i>Employment Status</i>	10
❖ <i>Household Income</i>	13
❖ <i>Age Distribution</i>	14
❖ <i>Housing</i>	16
Existing Land Use	20
❖ <i>Zoning</i>	20
❖ <i>Existing Land Use Pattern</i>	22
Natural Features	31
❖ <i>Wetlands & Wooded Areas</i>	31
❖ <i>Floodplain</i>	31
Community Services & Infrastructure	35
❖ <i>Community Services & Facilities</i>	35
❖ <i>Public Utility Systems</i>	40
❖ <i>Transportation</i>	45
Sub-Area: Ann Arbor Road Corridor	55
❖ <i>Existing Conditions</i>	56
❖ <i>Closure of the Intersecting Local Streets</i>	57
❖ <i>Impact on the Single-Family Residential Area</i>	59
Goals & Strategies	60
Future Land Use Map	68
❖ <i>Summary of the Future Land Use Designations</i>	68
❖ <i>Detailed Description of the Future Land Use Designations</i>	70
❖ <i>Proposed Modifications to the Future Land Use Map</i>	75
References	88

List of Figures

Figure 1: Regional Location	3
Figure 2: Plymouth Township – Population Change	4
Figure 3: Comparison of Population Growth Trends	5
Figure 4: Regional Population Change	6
Figure 5: Map of Regional Population Change	7
Figure 6: Plymouth Township – Population Projection	8
Figure 7: Plymouth Township – Educational Attainment	9
Figure 8: Plymouth Township – Employment Status	10
Figure 9: Plymouth Township – Where Residents Work	11
Figure 10: Plymouth Township – Type of Occupations	11
Figure 11: Plymouth Township – Forecast of Jobs by Industry	12
Figure 12: Plymouth Township – Annual Household Income	13
Figure 13: Plymouth Township – Age Distribution	14
Figure 14: Plymouth Township – Age Distribution Projection	15
Figure 15: Plymouth Township – Change in Housing Units	16
Figure 16: Plymouth Township – Housing Units by Occupancy	16
Figure 17: Plymouth Township – Dwelling Units by Structure	17
Figure 18: Plymouth Township – Year Residential Structure was Built	18

Figure 19: Plymouth Township – Value of Owner-Occupied Housing Units	18
Figure 20: Plymouth Township – Summary of Existing Land Use Distribution	25
Figure 21: Plymouth Township – 2012 Average Annual Daily Traffic (AADT)	49
Figure 22: Plymouth Township – Top 10 High-Frequency Crash Locations	52
Figure 23: Boundary of the Ann Arbor Road Corridor Sub-Area	55
Figure 24: Redeveloped Site within the Sub-Area	56
Figure 25: Closure of Oakview Avenue	58
Figure 26: Proposed Modification to Site 1	76
Figure 27: Proposed Modification to Sites 2 & 3	77
Figure 28: Proposed Modification to Sites 4, 5, 6, & 7	79
Figure 29: Proposed Modification to Sites 8 & 9	80
Figure 30: Proposed Modification to Site 10	82
Figure 31: Proposed Modification to Sites 11 & 12	83
Figure 32: Proposed Modification to Site 13	85

List of Maps

Map 1: Plymouth Township – Zoning Classifications	21
Map 2: Plymouth Township – Existing Land Use	24
Map 3: Plymouth Township – Private Open Space in Single-Family Subdivisions	32
Map 4: Plymouth Township – Floodway Areas	33
Map 5: Plymouth Township – Community Facilities	39
Map 6: Plymouth Township – Water System	41
Map 7: Plymouth Township – Sanitary Sewer System	43
Map 8: Plymouth Township – Storm Sewer System	44
Map 9: Plymouth Township – Future Right-of-Way	46
Map 10: Plymouth Township – Traffic Volume	51
Map 11: Plymouth Township – Top 10 High-Frequency Crash Locations	53
Map 12: Plymouth Township – Future Land Use	87

Introduction

Originally settled in 1824, Plymouth became a township in 1827. At that time, the boundaries of Plymouth Township encompassed areas which are now Canton Township, the City of Plymouth, and Northville Township. In fact, Canton Township used to be unofficially known as “South Plymouth,” until it became an independent township in 1834. The City of Plymouth and Northville Township became independent jurisdictions in 1867 and 1898, respectively. Plymouth Township later became a charter township on April 19, 1977.

For many years, Plymouth Township was an agricultural and logging community with grist and saw mills forming the major industry. In 1871, the construction of the railroad encouraged industrial growth in the community and, with the turn of the century, manufacturing operations began to emerge. In 1938, the Burroughs Corporation constructed a large plant on Plymouth Road, which is still in use. The construction of the freeways in the 1970’s further expanded the potential for industrial growth, and facilitated Plymouth Township’s rise as the prime location for research, development, and technology that it is today. Over time, the Township has transitioned from an agricultural community to a suburban community with a strong foundation of high-quality housing, and opportunities in business, industry, and technology.

During the 1960’s through the 1980’s, Plymouth Township experienced substantial growth, along with an increasing demand for housing. In 1966, approximately 74% of the land in the Township was designated as agricultural or undeveloped. By 1990, this amount had been reduced to approximately 36%. In 2014, Plymouth Township is considered to be a mostly “built-out” community. Over the years, Township leaders have strived to enact zoning and land use policies that would lead to a logical and orderly development pattern. The challenge that now faces the Township is to ensure that the redevelopment of outdated sites will fit into the context of the existing environment. The goals and policies stated in the Township Master Plan for Land Use are critical for maintaining the Township’s image as a desirable community in which to live, work, and recreate.

The Master Plan for Land Use is a broad policy document, which is used as a guide for land use and community development decisions. This document aims to establish a long-range vision for Plymouth Township, which will preserve and enhance the high-quality and orderly development pattern that was established in previous decades. To accomplish this, the Master Plan for Land Use provides an analysis of the existing conditions and future projections, and identifies goals and strategies to uphold the Township’s status as a well-balanced community. Therefore, the Master Plan for Land

Use is a valuable decision-making guide for members of the Planning Commission, the Board of Trustees, and Township staff.

The key components of the Master Plan for Land Use are as follows:



Community Profile

Population, Education, Employment, Income, Age, Housing



Existing Land Use

Current Land Use Designations and Development Patterns



Natural Features

Value to the Township and Impact on Development



Community Services & Infrastructure

Location and Type of Services and Potential Constraints



Sub Area: Ann Arbor Road Corridor

Existing Conditions and Recommendations



Goals & Strategies

General Goals & Strategies to Guide Future Development



Future Land Use Map

Visual Display of Expected Future Development Patterns

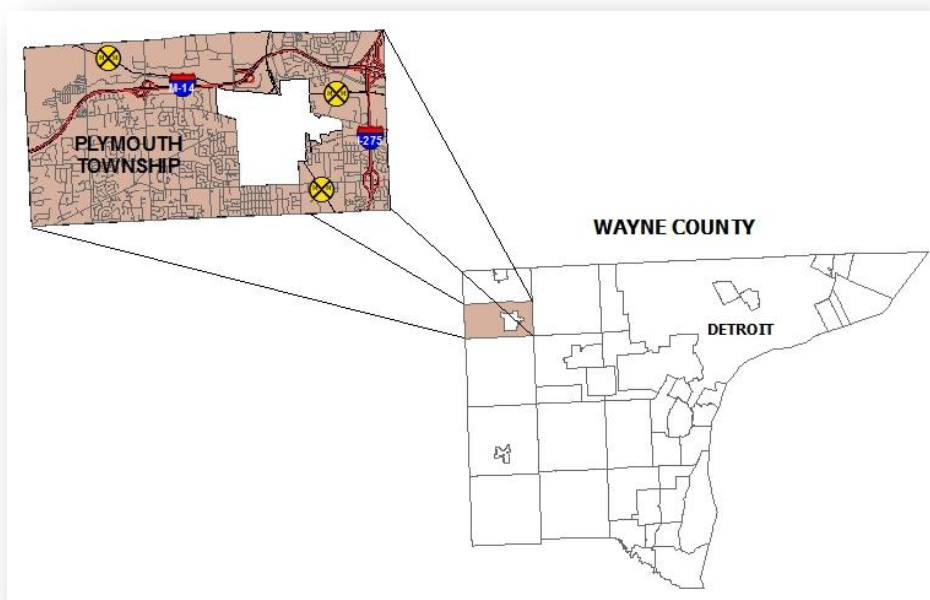
A periodic review of the Master Plan for Land Use is essential for determining whether the Township is developing or redeveloping in a manner that is consistent with the long-range vision of the community. The review process affords the Township an opportunity to respond to changing conditions, and re-evaluate goals and strategies. The end result is an updated Master Plan for Land Use, which provides a framework for Township leaders to make decisions that will further enhance the quality of life in Plymouth Township.

Community Profile

Location

Plymouth Township consists of approximately 16.6 square miles, which is less than half of a standard township, and is located in the northwest portion of Wayne County (see Figure 1: Regional Location). The City of Plymouth occupies 2.3 square miles in the approximate center of Plymouth Township.

Figure 1: Regional Location



Source: Plymouth Township GIS & United States Census Bureau, 2010 Tiger/Line Shapefiles

The Township is bounded by Five Mile Road to the north, Eckles Road to the east, Joy Road to the south, and Napier Road to the west. The neighboring communities include: the City of Plymouth, Northville Township, the City of Livonia, the City of Westland, Canton Township, Salem Township, and Superior Township.

Plymouth Township is served by the CSX Railroad, and two major freeways: M-14 (I-96), which runs from east to west through the northern portion of the Township, and I-275, which runs from north to south through the eastern portion of the Township. The freeways establish key linkages to the City of Ann Arbor and the City of Detroit, and provide convenient access to the Mettetal Airport in Canton Township.

Population Counts & Projections

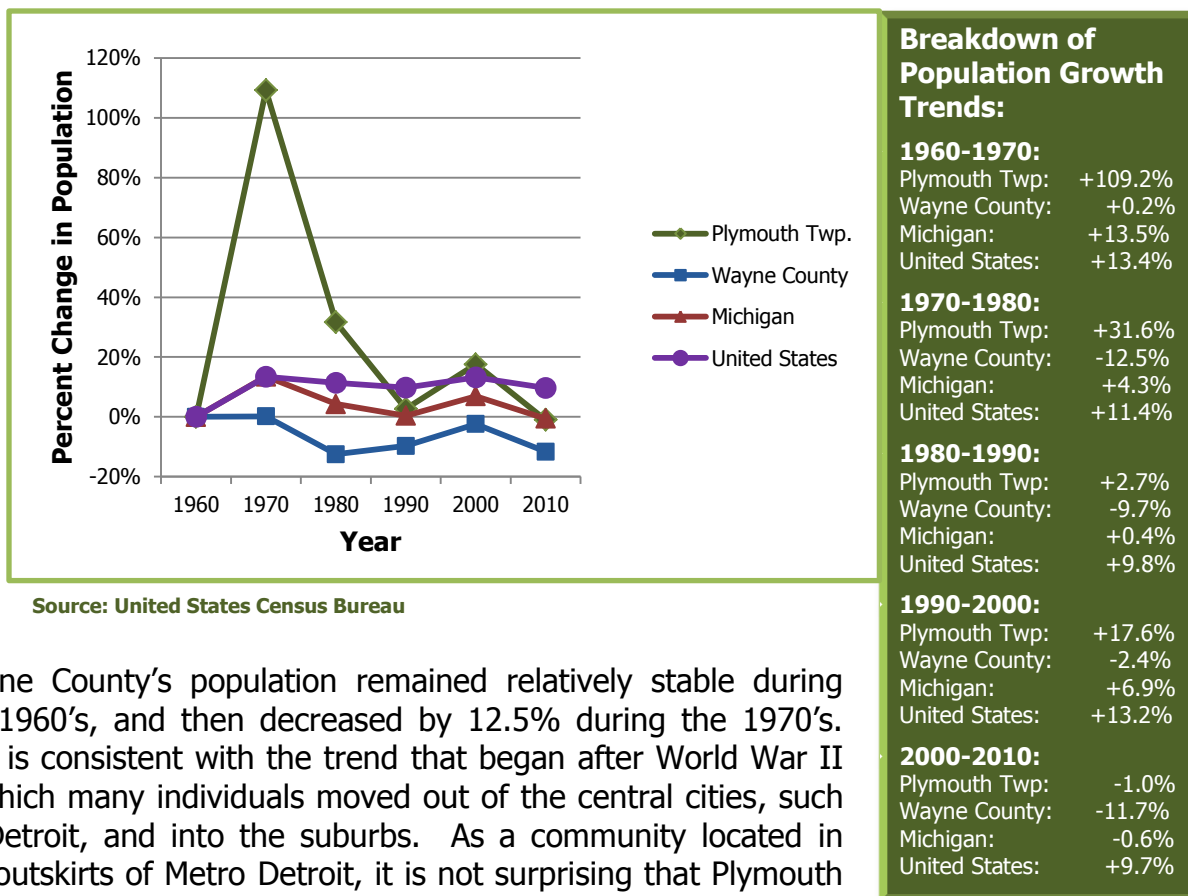
Plymouth Township was a predominantly agricultural community with a population of only 8,364 in 1960. As of the 2010 Census, the Township's population consists of 27,524 individuals. The majority of this growth occurred from 1960 to 1980. Figure 2 reveals that the population increased by more than double between 1960 and 1970, and another substantial increase occurred between 1970 and 1980. The Township's population continued to grow at a slower rate between 1980 and 2000, and appears to have stabilized between 2000 and 2010 with a percent change of -1.0% (see Figure 2: Plymouth Township – Population Change).

Figure 2: Plymouth Township – Population Change

	Population	Numerical Change	Percent Change
1960	8,364		
1970	17,497	+9,133	+109.2%
1980	23,028	+5,531	+31.6%
1990	23,648	+620	+2.7%
2000	27,798	+4,150	+17.6%
2010	27,524	-274	-1.0%

Source: United States Census Bureau & SEMCOG Historical Population 1900-2000

Population data from the United States Census Bureau indicates that the average percent change in population for the United States is 11.4% per 10 years, and the average for the State of Michigan is 4.9% per 10 years. During the 1960's and 1970's, the total population for both the United States and the State of Michigan exceeded these averages. Likewise, Plymouth Township was experiencing rapid growth during this period. Figure 3 shows that the Township's population was expanding at a much faster rate than the national and state averages (see Figure 3: Comparison of Population Growth Trends).

Figure 3: Comparison of Population Growth Trends


Source: United States Census Bureau

Wayne County's population remained relatively stable during the 1960's, and then decreased by 12.5% during the 1970's. This is consistent with the trend that began after World War II in which many individuals moved out of the central cities, such as Detroit, and into the suburbs. As a community located in the outskirts of Metro Detroit, it is not surprising that Plymouth Township experienced major growth during this period even though Wayne County recorded an overall decrease in population.

The economic recession in the 1980's slowed the population growth in Plymouth Township as well as the State of Michigan and the United States, but each experienced a rebound during the 1990's. Over the last 10 years, the Great Recession has had a major adverse impact on the State of Michigan and, in particular, the Southeast Michigan Region. Between 2000 and 2010, the State of Michigan experienced a population loss of 0.6% and Wayne County experienced a population loss of 11.7%. Figure 4 provides a detailed breakdown of the population change between 2000 and 2010 for the 18 communities included in the Conference of Western Wayne (see Figure 4: Regional Population Change).

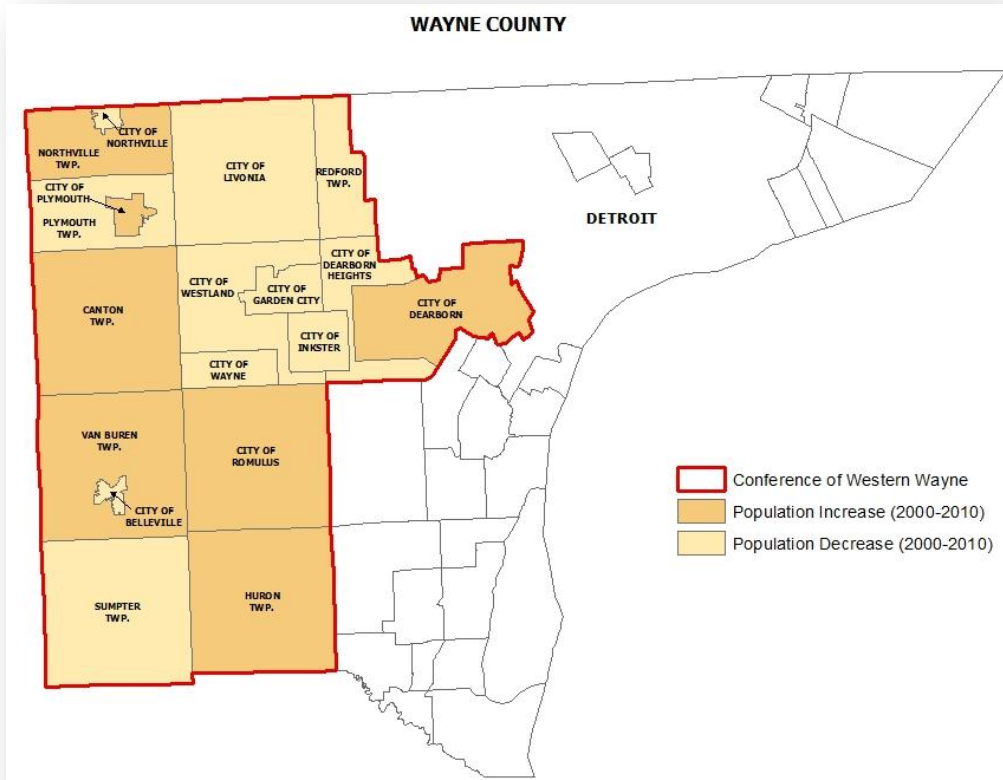
Figure 4: Regional Population Change

	Population (2000)	Population (2010)	Numerical Change	Percent Change
Plymouth Twp.	27,798	27,524	-274	-1.0%
City of Belleville	3,997	3,991	-6	-0.2%
Canton Twp.	76,366	90,173	+13,807	+18.1%
City of Dearborn	97,775	98,153	+378	+0.4%
City of Dearborn Heights	58,264	57,774	-490	-0.8%
City of Garden City	30,047	27,692	-2,355	-7.8%
Huron Twp.	13,737	15,879	+2,142	+15.6%
City of Inkster	30,115	25,369	-4,746	-15.8%
City of Livonia	100,545	96,942	-3,603	-3.6%
City of Northville	6,459	5,970	-489	-7.6%
Northville Twp.	21,036	28,497	+7,461	+35.5%
City of Plymouth	9,022	9,132	+110	+1.2%
Redford Twp.	51,622	48,362	-3,260	-6.3%
City of Romulus	22,979	23,989	+1,010	+4.4%
Sumpter Twp.	11,856	9,549	-2,307	-19.5%
Van Buren Twp.	23,559	28,821	+5,262	+22.3%
City of Wayne	19,051	17,593	-1,458	-7.7%
City of Westland	86,602	84,094	-2,508	-2.9%
Total	690,830	699,504	+8,674	+1.3%

Source: United States Census Bureau

Although the Conference of Western Wayne communities had an overall increase in population between 2000 and 2010, 11 of the 18 communities experienced population decreases. Figure 5 identifies the geographic location of the Conference of Western Wayne communities. The communities with a population decrease between 2000 and 2010 are represented in light orange, and the communities with a population increase during this time period are shown in dark orange (see Figure 5: Map of Regional Population Change).

Figure 5: Map of Regional Population Change



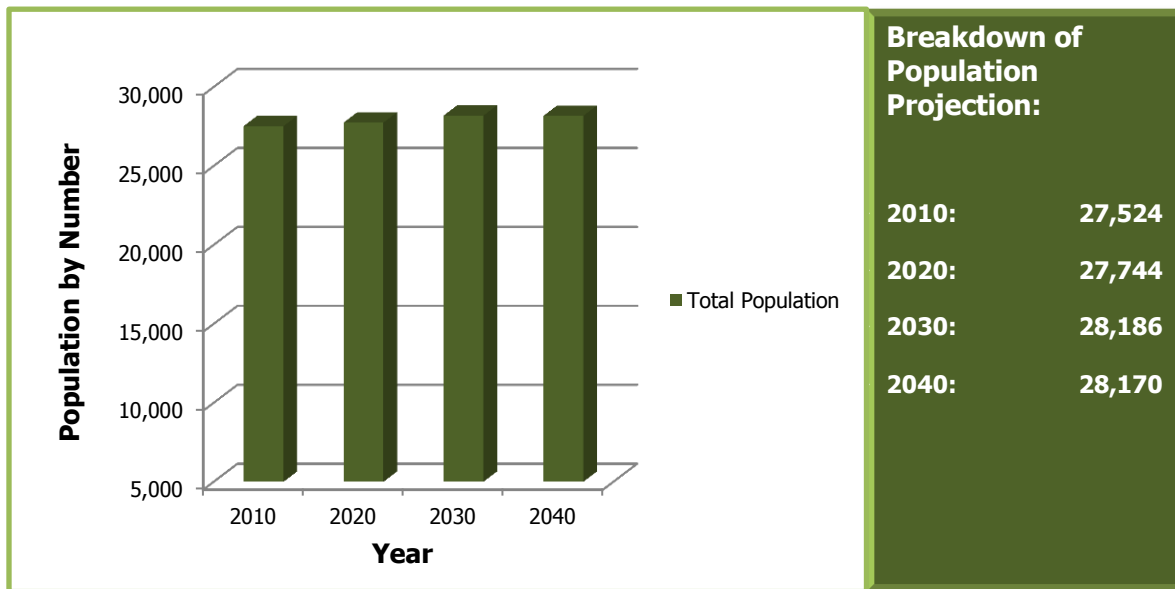
Source: Plymouth Township GIS & United States Census Bureau, 2010 Tiger/Line Shapefiles
United States Census Bureau (Population Data)

In general, it appears that many of the communities with population decreases between 2000 and 2010 were among the first communities in the Conference of Western Wayne to be impacted by suburban expansion from Detroit. According to historical population data from the Southeast Michigan Council of Governments (SEMCOG), Redford Township, Dearborn Heights, Dearborn, Livonia, Westland, Garden City, Inkster, Wayne, and Plymouth Township experienced peak growth periods between 1950 and 1970 (Historical Population and Employment by Minor Civil Division, Southeast Michigan, SEMCOG, 2002). With the exception of the City of Dearborn, which experienced a slight increase of 0.4%, each of the aforementioned communities recorded population decreases between 2000 and 2010 (see Figure 5: Map of Regional Population Change).

Conversely, the three communities with the largest population increases between 2000 and 2010, including Canton Township, Northville Township, and Van Buren Township, experienced peak growth periods between 1970 and 1990 (Historical Population and Employment by Minor Civil Division, Southeast Michigan, SEMCOG, 2002). Because peak growth occurred in these communities more recently, it is likely that many of these areas still had significant undeveloped land resources and, therefore, experienced major growth between 2000 and 2010.

For Plymouth Township, the population appears to have stabilized between 2000 and 2010. Based upon the SEMCOG 2040 Regional Forecast, this trend is expected to continue. Figure 6 depicts a population increase of 646 individuals, which equates to 2.4%, between 2010 and 2040 (see Figure 6: Plymouth Township – Population Projection).

Figure 6: Plymouth Township – Population Projection



Source: SEMCOG 2040 Regional Forecast Report

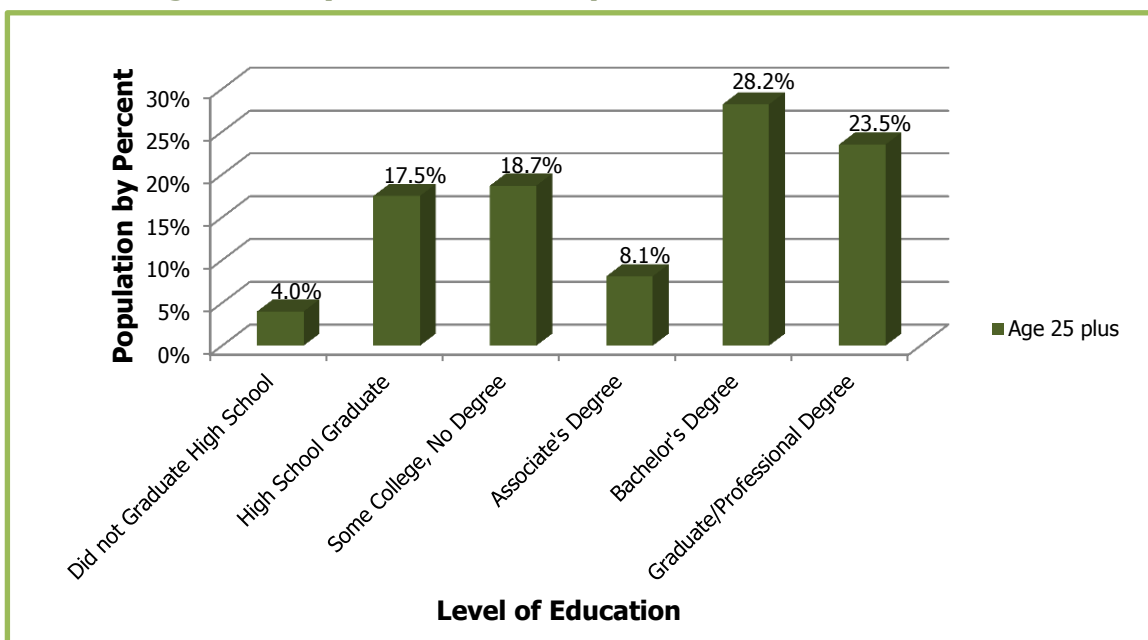
Based upon historical population trends for Plymouth Township and the Conference of Western Wayne communities, along with future forecasts, it appears that Plymouth Township has already experienced peak growth and has reached a period of stability. The Township can expect minor fluctuations in the total population count over the next 30 years, which are likely to have little impact on the future physical development of the community. However, the characteristics of the individuals within the population could have a significant impact on future development and land use decisions.

Educational Attainment

One population characteristic which influences the employment opportunities and household income for Plymouth Township residents, and thereby has the ability to influence future land use decisions, is educational attainment.

Data from the 2012 American Community Survey 5-Year Estimates indicates that 96.0% of Plymouth Township residents, of age 25 and older, have at least a high school education. Figure 7 provides a detailed record of the highest level of education achieved by Township residents (see Figure 7: Plymouth Township – Educational Attainment).

Figure 7: Plymouth Township – Educational Attainment



Source: United States Census Bureau, 2008-2012 American Community Survey 5-Year Estimates

As of 2012, 78.5% of Township residents have attended college, and 51.7% have earned a Bachelor's Degree or higher. It is clear that Plymouth Township residents are highly-educated, which diversifies the employment opportunities available and may lead to higher household incomes.

Employment Status

The 2010 Census classifies individuals, of age 16 and older, who are actively working or seeking a job as being “in the labor force,” and individuals who are not actively working or seeking a job as being “not in the labor force.” It is important to note that the “not in the labor force” designation does not include individuals who are “unemployed.” Figure 8 contains a breakdown of the employment status for Plymouth Township residents, based upon data from the 2012 American Community Survey 5-Year Estimates (see Figure 8: Plymouth Township – Employment Status).

Figure 8: Plymouth Township – Employment Status

	Population	Percent
16 plus	21,755	100%
In Labor Force	13,981	64.3%
Not in Labor Force	7,774	35.7%
Civilian Labor Force	13,974	64.2%
Employed	12,927	59.4%
Unemployed	1,047	4.8%
Armed Forces	7	Less than 1%

Source: United States Census Bureau, 2008-2012 American Community Survey 5-Year Estimates

In 2012, 64.3% of the Township’s population is in the labor force and, of this total, 59.4% are employed. The unemployment rate is estimated to be 4.8%. In comparison, unemployment is estimated to be 10.6% for Wayne County, and 7.8% for the State of Michigan, in 2012.

The businesses located in Plymouth Township offer a variety of employment options, and many Township residents have been able to take advantage of opportunities close to home. The SEMCOG 2040 Regional Forecast Report estimates that 13.4% of Plymouth Township residents also work in their home community, as demonstrated in Figure 9 (see Figure 9: Plymouth Township – Where Residents Work). Outside of Plymouth Township, the neighboring communities of Livonia and the City of Plymouth appear to be the two most common locations in which Plymouth Township residents work. Figure 9 indicates that 9.7% of Plymouth Township residents work in Livonia, and 8.9% work in the City of Plymouth.

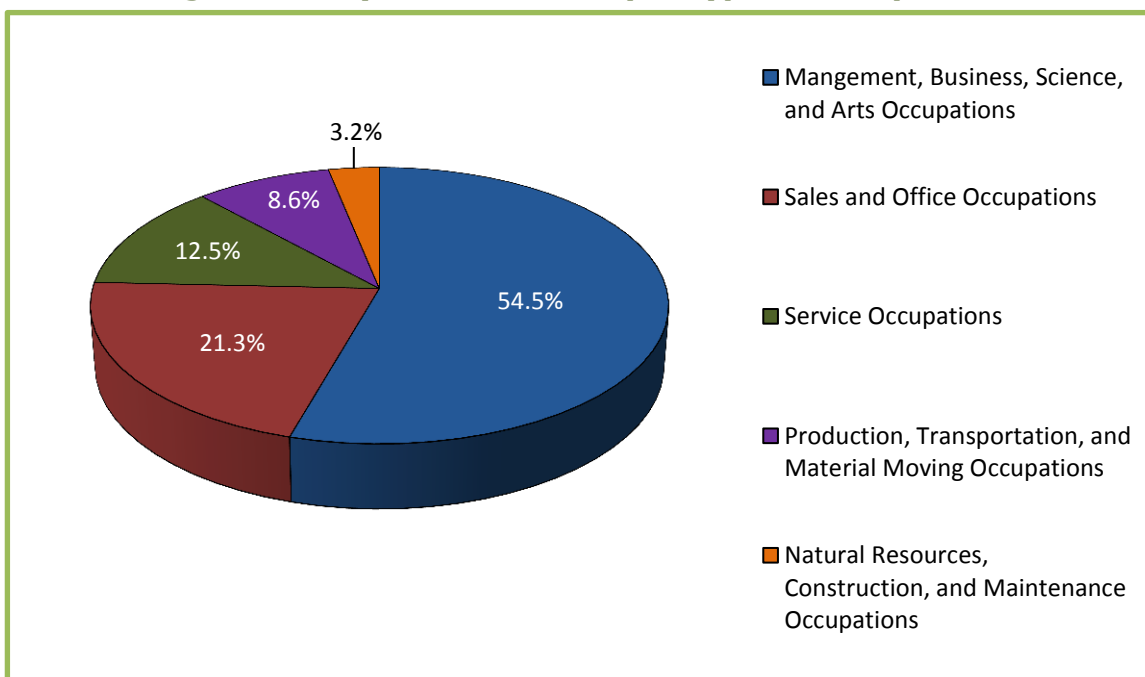
Figure 9: Plymouth Township – Where Residents Work

	Workers	Percent
Plymouth Township	1,745	13.4%
City of Livonia	1,265	9.7%
City of Plymouth	1,165	8.9%
City of Detroit	945	7.2%
City of Dearborn	875	6.7%
Canton Township	730	5.6%
City of Ann Arbor	725	5.6%
City of Southfield	520	4.0%
City of Farmington Hills	490	3.8%
City of Novi	400	3.1%
Elsewhere	4,192	32.1%

Source: SEMCOG 2040 Regional Forecast

Please Note: The total number of workers estimated in the SEMCOG 2040 Regional Forecast differs from the total number of workers estimated in the 2012 American Community Survey.

The 2012 American Community Survey 5-Year Estimates report that Plymouth Township residents are engaged in a variety of occupations both within and outside of the community. Figure 10 illustrates that 54.5% of Plymouth Township residents are involved in Management, Business, Science, and Arts Occupations (see Figure 10: Plymouth Township – Type of Occupations).

Figure 10: Plymouth Township – Type of Occupations


Source: United States Census Bureau, 2008-2012 American Community Survey 5-Year Estimates

Sales and Office Occupations claim 21.3% of the Township labor force, and Service Occupations claim 12.5%. The smallest occupation groups are Production, Transportation, and Material Moving Operations with 8.6%, and Natural Resources, Construction, and Maintenance Operations with 3.2%.

The type of occupations held by Plymouth Township residents, as shown in Figure 10, span across several different industries. The SEMCOG 2040 Regional Forecast Report estimates that 12,019 Township residents, which equates to 92.1% of the labor force, are currently employed in the Manufacturing and Knowledge-based Service industries (see Figure 11: Plymouth Township – Forecast of Jobs by Industry).

Figure 11: Plymouth Township – Forecast of Jobs by Industry

	2010	2040	Numerical Change
Natural Resources, Mining & Construction	624	652	+28
Manufacturing	5,258	4,213	-1,045
Wholesale Trade, Transportation, Warehousing, & Utilities	1,989	1,804	-185
Retail Trade	1,633	1,382	-251
Knowledge-based Services	6,761	7,944	+1,183
Services to Households & Firms	1,262	1,498	+236
Private Education & Healthcare	932	1,784	+852
Leisure & Hospitality	1,727	2,017	+290
Government	794	792	-2

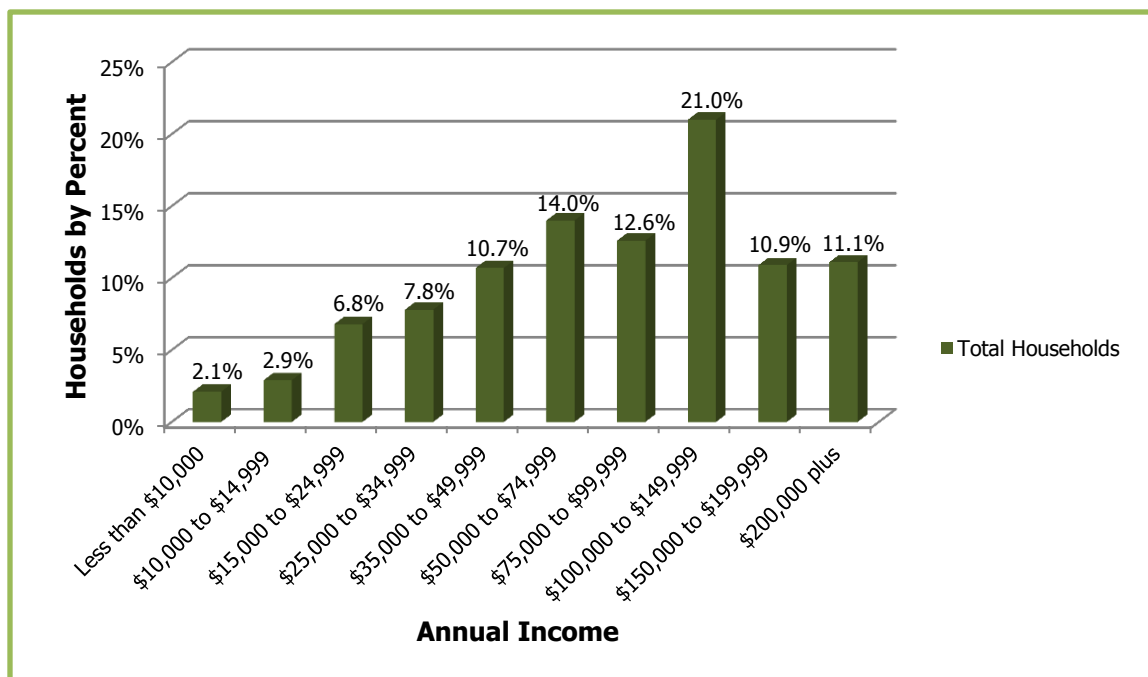
Source: SEMCOG 2040 Regional Forecast

SEMCOG defines Knowledge-based Services as a combination of the following sectors: Information; Finance and Insurance; Real Estate, Rental, and Leasing; Professional, Scientific, and Technical Services; and Management of Companies and Enterprises. These occupations often require a college degree at a minimum. Over the next 30 years, it is anticipated that the number of Township residents working in the Knowledge-based Services industry will increase.

Household Income

In general, a highly-educated and highly-skilled labor force is capable of generating high household incomes for the community. Figure 12 depicts that 55.6% of the households in Plymouth Township have an annual income of at least \$75,000, in 2012 (see Figure 12: Plymouth Township – Annual Household Income).

Figure 12: Plymouth Township – Annual Household Income



Source: United States Census Bureau, 2008-2012 American Community Survey 5-Year Estimates

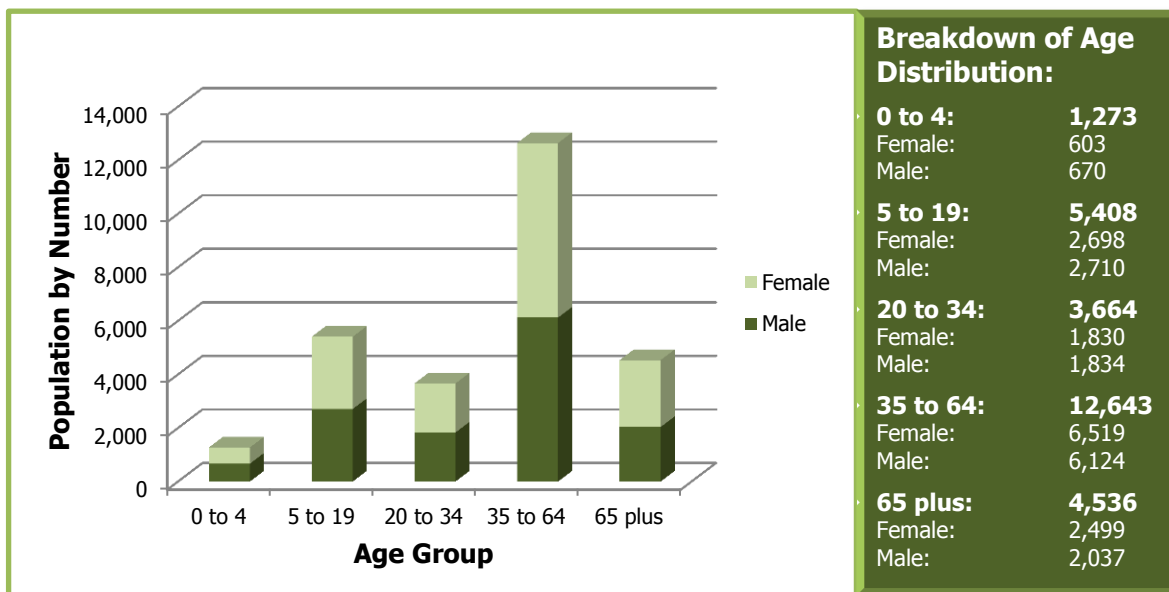
In addition, the 2012 American Community Survey 5-Year Estimates report that the median household income in Plymouth Township is \$86,156. This is significantly higher than the estimated median income of \$41,504 for Wayne County, and \$48,471 for the State of Michigan, in 2012.

In order to maintain a strong residential tax base, Plymouth Township must continue to attract high-quality businesses, and offer a variety of housing types. It is critical that the future land use and development policies of the Master Plan for Land Use are geared toward this objective. This aspect will be explored in subsequent sections.

Age Distribution

Another population characteristic which has the potential to shape the future land use needs of Plymouth Township is the age distribution of the residents. Figure 13 displays a breakdown of Plymouth Township's population by age group in 2010 (see Figure 13: Plymouth Township – Age Distribution).

Figure 13: Plymouth Township – Age Distribution



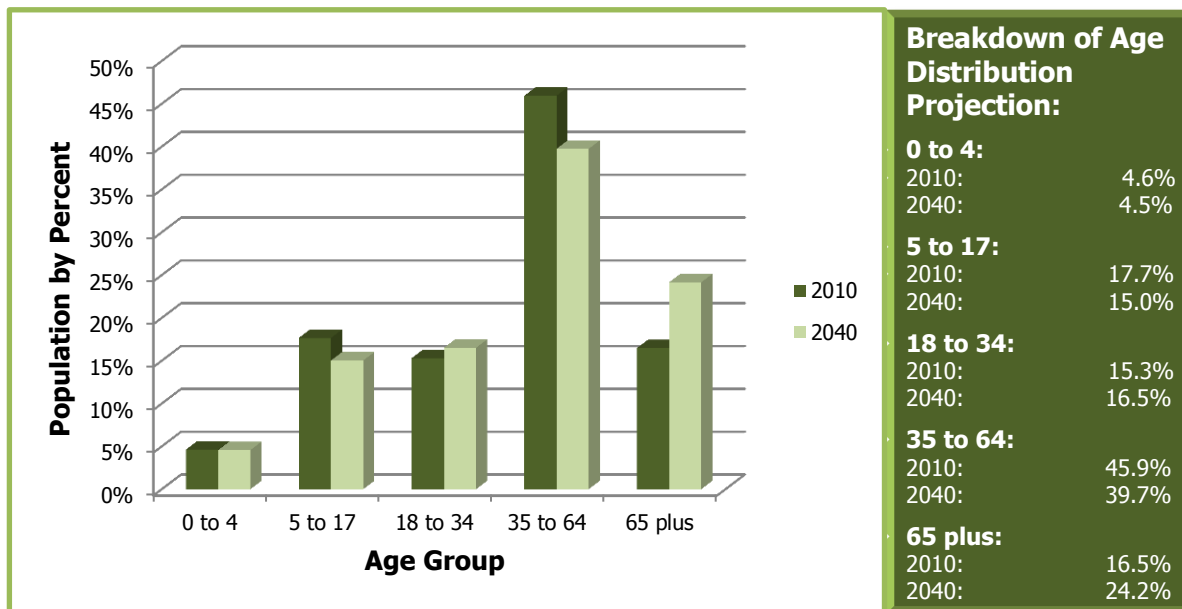
Source: United States Census Bureau, 2010 Census

The age groups utilized in Figure 13 are based upon the age group divisions used by the United States Census Bureau, but have been reclassified into 5 major life stage categories. Reclassifying the data improves the transparency of age distribution trends, which could influence future land use and development decisions. For instance, the "0 to 4" age group includes individuals who are of preschool age, and the "5 to 19" age group includes individuals who are of grade school age. The "20 to 34" age group includes individuals who are of college age, or early career age. Individuals within this age group are likely to be living on their own and are often renting a home. The "35 to 64" age group includes individuals who are of an established career age. Individuals within this age group are likely to be financially-secure and are often homeowners. The "65 plus" age group includes individuals who are of retirement age. Individuals within this age group are likely to be down-sizing to smaller homes, and may require assisted living services.

Figure 13 reveals that 12,643 individuals, who constitute 45.9% of Plymouth Township's population, are between the ages of 35 and 64, in 2010. The 2040 SEMCOG Regional Forecast Report expects the "35 to 64" age group to remain the

dominant age group in 2040 (see Figure 14: Plymouth Township – Age Distribution Projection).

Figure 14: Plymouth Township – Age Distribution Projection



Source: SEMCOG 2040 Regional Forecast Report

Please Note: The age group division used by SEMCOG in the 2040 Regional Forecast differs from the age group division used by the United States Census Bureau.

Although Figure 14 illustrates a decrease in the number of individuals between the ages of 35 to 64 over the next 30 years, this age group is still expected to claim the highest percentage of Plymouth Township residents in 2040. Also, the “65 plus” group is expected to replace the “5 to 17” group as the second-largest age group in Plymouth Township.

Moreover, the 2010 Census indicates that the median age in Plymouth Township has increased over the last 10 years from 39.6 to 44.5, which is higher than the median age of 38.9 for the State of Michigan, and 37.2 for the United States. The age distribution projections, combined with the increasingly-high median age, are a clear indication that Plymouth Township’s population is maturing. Over time, this could precipitate changes in the housing needs of the community.

Housing

Evidently, changes in the demand for housing in Plymouth Township may influence future residential development. The trend of suburban expansion, along with the construction of the freeways during the 1970's, facilitated major residential growth in Plymouth Township between 1970 and 1980 (see Figure 15: Plymouth Township – Change in Housing Units).

Figure 15: Plymouth Township – Change in Housing Units

	Housing Units	Numerical Change	Percent Change
1970	5,004		
1980	7,776	+2,772	+55.3%
1990	9,211	+1,435	+18.5%
2000	11,043	+1,832	+19.9%
2010	11,708	+665	+6.0%

Source: United States Census Bureau, 2010 Census

The number of housing units located within the Township increased by 55.3% between 1970 and 1980. Substantial increases also occurred between 1980 and 2000. Despite the impact of the Great Recession on the housing market in Michigan, residential growth continued in Plymouth Township between 2000 and 2010, but has occurred at a slower rate.

As of the 2010 Census, Plymouth Township contains a total of 11,708 housing units, of which 11,203 are occupied and 505 are vacant. The quantity of vacant units has increased from 2.6% of the housing stock in 2000, to 4.3% in 2010. This increase is likely due to the influx of foreclosures during the Great Recession. Of the occupied housing units, the vast majority is owner-occupied, as demonstrated in Figure 16 (see Figure 16: Plymouth Township – Housing Units by Occupancy).

Figure 16: Plymouth Township – Housing Units by Occupancy

	2000		2010	
	Number	Percent	Number	Percent
Total Units	11,043	100%	11,708	100%
Occupied Units	10,757	97.4%	11,203	95.7%
Vacant	286	2.6%	505	4.3%
Occupied Units	10,757	100%	11,203	100%
Owner-Occupied	8,973	83.4%	9,323	83.2%
Renter-Occupied	1,784	16.6%	1,880	16.8%

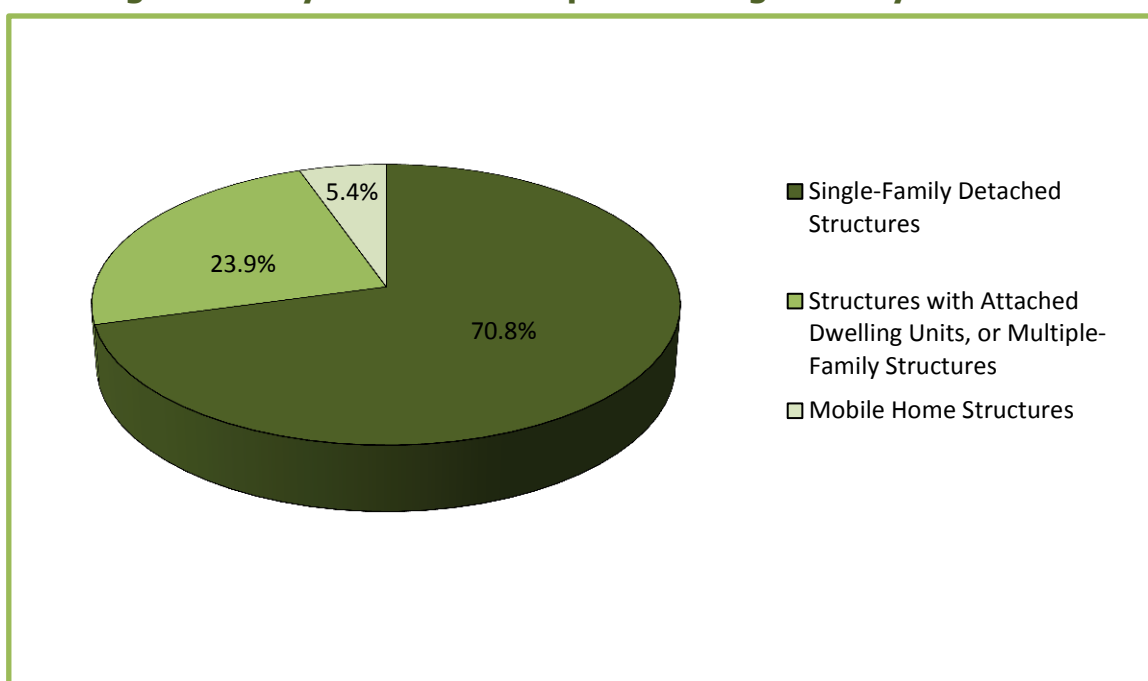
Source: United States Census Bureau

The trend of high owner-occupancy has been maintained from 2000 to 2010 with 83.2% of housing units classified as owner-occupied. In general, high owner-

occupancy rates foster neighborhood stability and well-maintained residential developments.

The housing stock in Plymouth Township offers a mix of housing types, including single-family dwellings, multiple-family dwellings, and mobile home dwellings. Figure 17 reveals that single-family detached structures account for 70.8% of the housing stock in Plymouth Township and, therefore, are the most-common form of housing within the Township. Structures with attached dwelling units, or multiple-family structures, account for 23.9%, and mobile home units account for 5.4% (see Figure 17: Plymouth Township – Dwelling Units by Structure).

Figure 17: Plymouth Township – Dwelling Units by Structure



Source: United States Census Bureau, 2008-2012 American Community Survey 5-Year Estimates

Plymouth Township experienced a major increase in the demand for housing between 1960 and 1980. Figure 18 estimates that 19.4% of the existing residential structures were built between 1960 and 1970, and 25.9% were built between 1970 and 1980. Another large wave of residential construction occurred between 1990 and 2000, in which approximately 17.3% of the existing residential structures were built (see Figure 18: Plymouth Township – Year Residential Structure was Built).

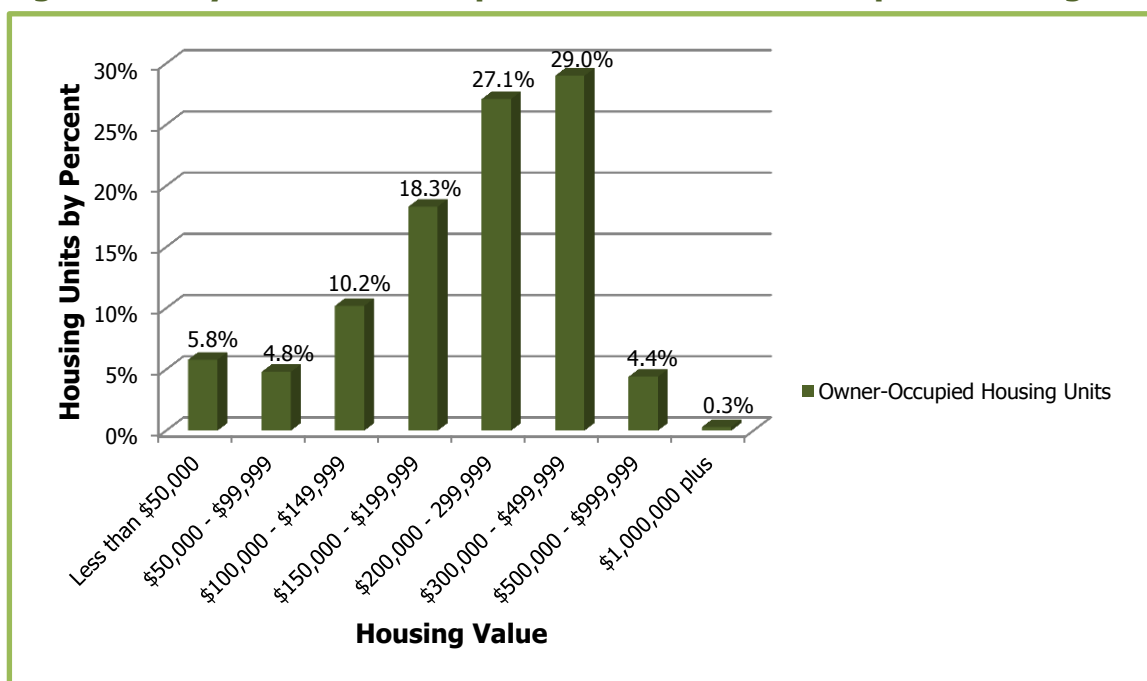
Figure 18: Plymouth Township – Year Residential Structure was Built

	Number	Percent
Total Units	11,048	100%
Built 2000 - 2009	1,021	9.2%
Built 1990 - 1999	1,909	17.3%
Built 1980 - 1989	1,615	14.6%
Built 1970 - 1979	2,857	25.9%
Built 1960 - 1969	2,141	19.4%
Built 1950 - 1959	910	8.2%
Prior to 1950	595	5.4%

Source: United States Census Bureau, 2008-2012 American Community Survey 5-Year Estimates

Please Note: The total number of housing units estimated in the 2012 American Community Survey differs from the total number of housing units in the 2010 Census.

For the most part, the housing stock in Plymouth Township is in good condition and generates high housing values. Figure 19 provides a detailed breakdown of the housing values in Plymouth Township in 2012 (see Figure 19: Plymouth Township – Value of Owner-Occupied Housing Units).

Figure 19: Plymouth Township – Value of Owner-Occupied Housing Units


Source: United States Census Bureau, 2008-2012 American Community Survey 5-Year Estimates

As of 2012, 60.8% of homes in Plymouth Township have a value of at least \$200,000, and only 5.8% of homes have a value of less than \$50,000. In addition, 29.0% of homes are valued between \$300,000 and \$499,999.

According to the 2012 American Community Survey 5-Year Estimates, the median housing value is estimated at \$247,600, and the median gross rent is \$778. This is significantly higher than the median housing value estimate of \$97,100 for Wayne County, and \$128,600 for the State of Michigan, in 2012. Therefore, Plymouth Township has a strong housing tax base, and the range of values indicates a diverse housing market.

The SEMCOG 2040 Regional Forecast Report estimates that the total number of occupied housing units in Plymouth Township will increase from 11,203 to 11,400 by 2040. Over the last several years, the pattern of residential development in Plymouth Township has shifted. The proposed developments tend to be of a smaller-scale and contain fewer dwelling units. It is likely that the quantity and size of undeveloped land resources currently available in the Township have contributed to this trend, which will be explored in subsequent sections. Nevertheless, the Township anticipates the pattern of smaller residential developments to continue, and expects a modest increase in residential development over the next 30 years, similar to the SEMCOG projection for future housing.

Key Concepts from the Community Profile Study

- ❖ **The Township has already experienced peak growth and seems to have entered a period of stability.**
- ❖ **The Township's population is maturing.**

Existing Land Use

For the most part, the physical development of Plymouth Township began in what is now the City of Plymouth, and then spread east into the Township. Single-family subdivisions began to appear along Ann Arbor Trail and Ann Arbor Road during the 1920's. The George H. Robinson subdivision was the first single-family subdivision to be recorded, and was developed northeast of Ann Arbor Trail and Haggerty Road in 1921. Over time, the eastern half of the Township has evolved into a predominantly medium-density residential area with supporting commercial and office uses. Industrial uses are also present, but are concentrated along the railroad and the freeways. Eventually, development extended to the western half of the Township. The agricultural uses that once dominated the land to the west of Sheldon Road gradually gave way to high-technology and industrial uses to the north of M-14, and lower-density residential uses to the south of M-14.

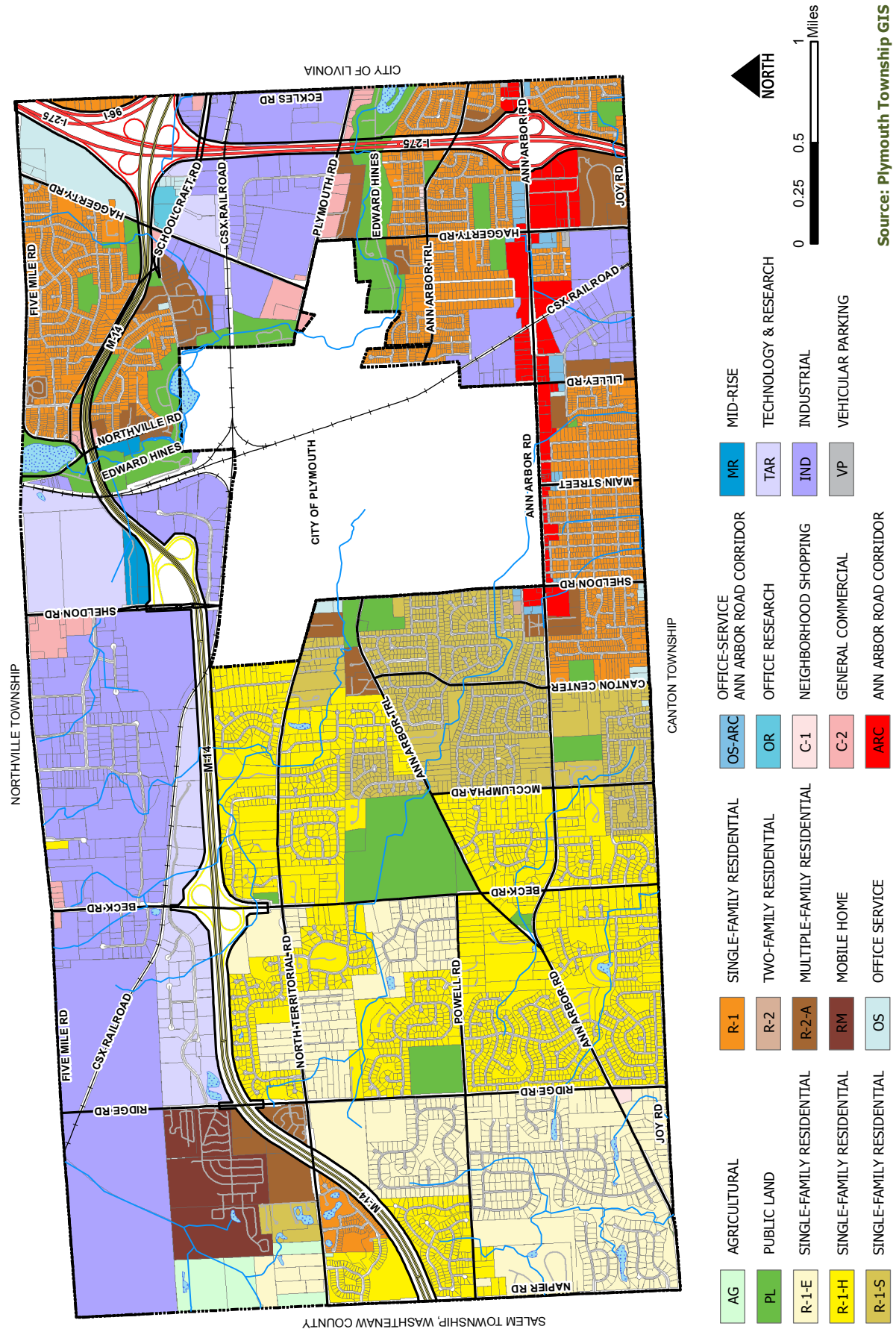
The needs of the Township residents and businesses have driven the Township's transformation from an agricultural community to a suburban community. It is critical that the land use pattern continues to respond to the needs of Plymouth Township citizens. The zoning regulations are an important tool for ensuring this outcome.

Zoning

Plymouth Township has the ability to regulate the use of land through zoning. All property within the Township is classified into a particular zoning district. The Township Zoning Ordinance establishes a set of permitted land uses, and requirements for the physical development of property, for each zoning district. The zoning classifications are reflected on the official Zoning Map of the Township.

Map 1 illustrates the current zoning classifications (see Map 1: Plymouth Township – Zoning Classifications). Please note that Map 1 is a reproduction of the official Zoning Map of the Township.

Map 1: Plymouth Township - Zoning Classifications



Existing Land Use Pattern

The existing land use pattern is a product of the various zoning classifications within Plymouth Township. In 2014, the existing land uses were evaluated by utilizing the ArcGIS mapping program. The existing land use of each parcel was identified on a map, and a calculation tool within ArcGIS was used to derive the total acreage of each land use category. The existing land use categories are summarized below.

Summary of the Existing Land Use Categories



Agricultural/Undeveloped

Land which is used for farming purposes, or is otherwise undeveloped.



Single-Family Residential

Land which is used for one single-family dwelling. Also includes developments established under a Cluster Housing Option or a Residential Unit Development Option.



Multiple-Family Residential

Land which is used for multiple-family structures, such as but not limited to apartment buildings, townhouses, or attached condominium units.



Mobile Home

Land which is used for manufactured single-family housing within a mobile home park.



Office

Land which is used for office purposes, such as but not limited to medical offices, or financial, professional, administrative, or executive offices.



Commercial

Land which is used for commercial purposes, such as but not limited to convenience or comparative retail, personal service, restaurants, or automotive commercial.



Technology & Research

Land which is used for high-technology, research, and prototype development.



Industrial

Land which is used for industrial purposes, such as but not limited to warehousing, manufacturing, assembling, packaging, or testing of products.



Public/Institutional

Land which is used for public or institutional purposes, such as but not limited to churches, mortuaries, private schools, private golf courses or clubs, utilities, or Township offices or fire stations.

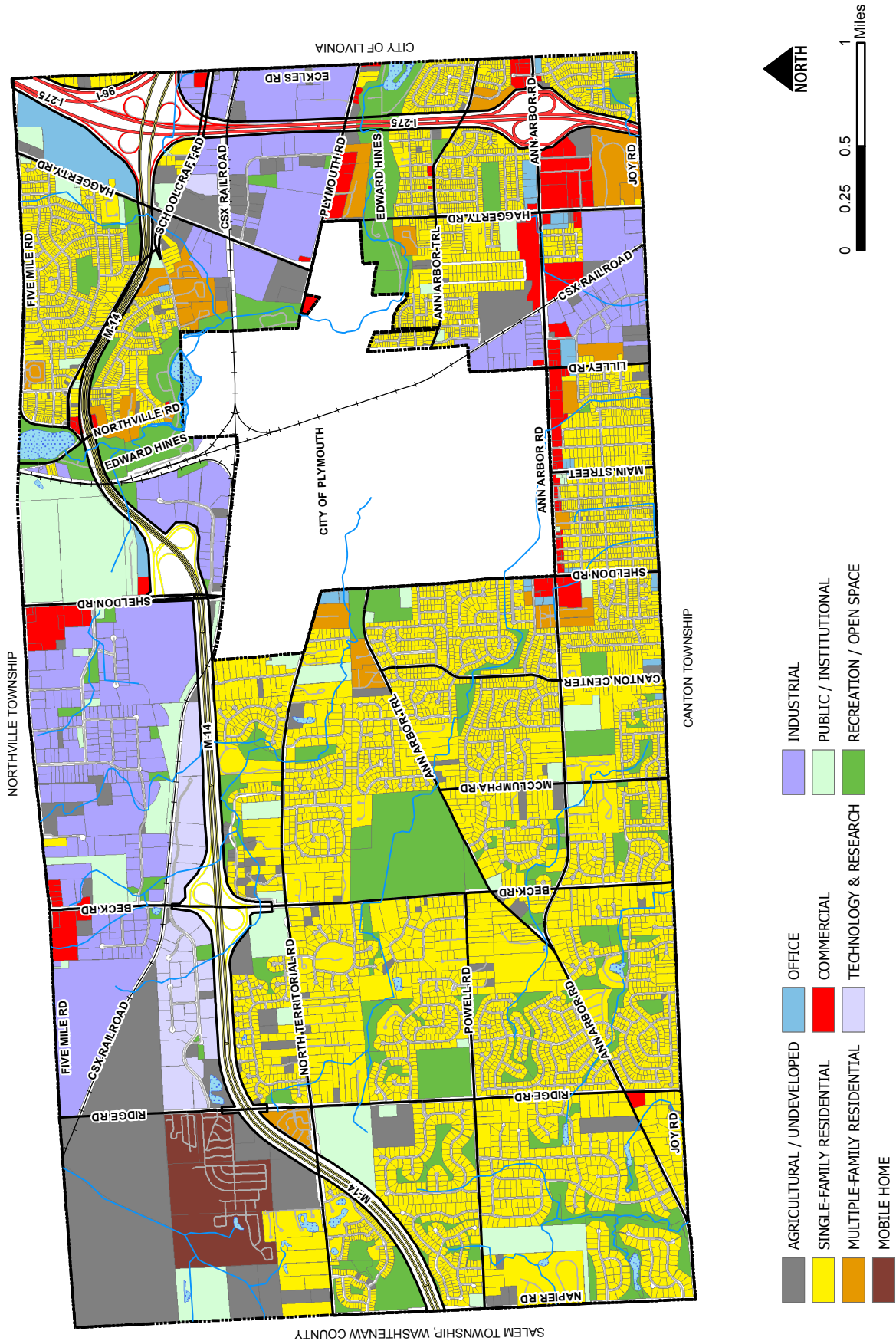


Recreation/Open Space

Land which is used for recreational purposes, such as Township-owned parks, the Middle Rouge Parkway, developed or undeveloped public school sites, or private open space within a platted subdivision.

Each of the aforementioned land use categories is depicted on Map 2 (see Map 2: Plymouth Township – Existing Land Use). Map 2 demonstrates that a significant portion of the land area within Plymouth Township is occupied by Single-Family Residential uses.

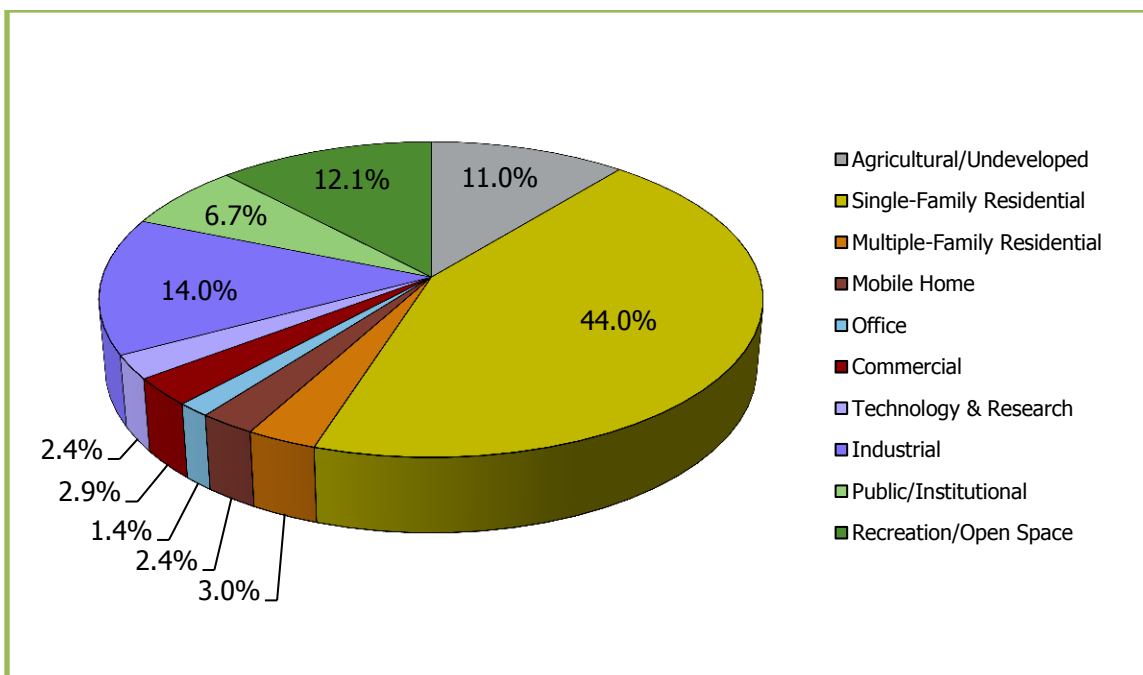
Map 2: Plymouth Township - Existing Land Use



Source: Plymouth Township GIS

Figure 20 contains a summary of the existing land use distribution, as shown in Map 2. As of 2014, the Single-Family Residential land use category accounts for 44.0% of the land area. The next largest categories are Industrial, with 14.0%, and Recreation/Open Space, with 12.1% (see Figure 20: Plymouth Township – Summary of Existing Land Use Distribution).

Figure 20: Plymouth Township – Summary of Existing Land Use Distribution



	Acres	Percent
Total Acres	8,472	100%
Agricultural/Undeveloped	928	11.0%
Single-Family Residential	3,730	44.0%
Multiple-Family Residential	256	3.0%
Mobile Home	205	2.4%
Office	121	1.4%
Commercial	243	2.9%
Technology & Research	207	2.4%
Industrial	1,189	14.0%
Public/Institutional	571	6.7%
Recreation/Open Space	1,021	12.1%

Source: Plymouth Township GIS

Please Note: The right-of-way for the freeways, roads, and railroads (approximately 1,785 acres) are not included.

A detailed analysis of the existing land use pattern is provided below, which considers the status of each existing land use category and the potential for future growth.

Detailed Analysis of the Existing Land Use Pattern



Agricultural/Undeveloped

Land which is used for farming purposes, or is otherwise undeveloped.

The Existing Land Use Map, provided in Map 2, and the summary chart, provided in Figure 20, indicates that Plymouth Township is nearing maximum build-out. In 2014, approximately 928 acres, or 11.0%, of the land area is classified as Agricultural/Undeveloped. These areas are scattered throughout the Township and occur in a variety of zoning districts. However, approximately 58% of the land within the Agricultural/Undeveloped category occurs in the Industrial District. In fact, the largest contiguous section of undeveloped land in the Township consists of three parcels located south of Five Mile Road between Napier Road and Beck Road. This area has an aggregate total of approximately 429 acres and is currently zoned Industrial.



Single-Family Residential

Land which is used for one single-family dwelling. Also includes Cluster Housing Option or Residential Unit Development Option projects.

Single-Family Residential uses constitute 44.0% of the land area within Plymouth Township. This land use category has four corresponding zoning districts, including R-1-E, R-1-H, R-1-S, and R-1. A key distinction between these districts is the maximum permitted density. The R-1-E District has the lowest maximum density at 0.8 dwellings per acre. The Single-Family district with the highest maximum density is the R-1 District, which is a medium-density district that allows for no more than five dwellings per acre. For the most part, medium-density residential is concentrated in the eastern portion of the Township, and lower-density residential is in the western portion, south of M-14. Many of the existing Single-Family Residential developments were created under a Cluster Housing Option or a Residential Unit Development Option, which allows the layout of the dwellings to be modified in order to conserve and incorporate natural features and open space into the development. In addition, a Residential Unit Development Option may include a mixture of dwelling types.

Although many of the large-acreage parcels have already been developed, Figure 20 reveals that there is still an opportunity for future growth within the Single-Family Residential districts. Approximately 187 acres, which are currently zoned for Single-Family Residential, remain undeveloped. Many of the remaining properties are individual lots or parcels, which contain an area of one acre or less, but some of the properties may be of a sufficient size to accommodate smaller-scale developments.



Multiple-Family Residential

Land which is used for multiple-family structures, including but not limited to apartment buildings, townhouses, or attached condominiums.

Multiple-Family Residential uses are dispersed throughout the Township and currently occupy 3.0% of the land area. The Township Zoning Ordinance has two zoning districts which accommodate Two-Family or Multiple-Family uses, including the R-2 and R-2-A Districts. Additionally, the Mid-Rise District permits Multiple-Family uses. Map 2 demonstrates that Multiple-Family Residential has typically been used as a transition between Single-Family Residential uses and more intense land uses. The majority of the land currently zoned for Multiple-Family Residential purposes has been developed. However, approximately 53 acres of contiguous land, located northwest of M-14 and Ridge Road, remains undeveloped and could support future growth.



Mobile Home

Land which is used for manufactured single-family housing within a mobile home park.

Mobile Home uses claim 2.4% of the land area within Plymouth Township. The RM District permits mobile home parks and is located in the northwest portion of the Township. A large wetland conservation area occurs on the mobile home sites. The Community Development Department records indicate that the land currently zoned for Mobile Home uses was developed to maximum capacity in 1990.



Office

Land which is used for office purposes, such as but not limited to medical offices, or financial, professional, administrative, or executive offices.

Office uses account for 1.4% of the land area and are scattered throughout the eastern portion of the Township. This land use category has three corresponding zoning districts, including OS, OS-ARC, and OR. Similar to the Multiple-Family Residential districts, the Office districts have been utilized as a buffer between Single-Family Residential and more intense land uses. Although most of the land presently zoned for Office uses has been developed, pure Office uses also exist in other zoning districts, such as Commercial, Mid-Rise, and Technology & Research. For the purposes of this study, pure Office uses located outside of the Office Districts have not been separated out and are included within the land use category of the corresponding zoning district.



Commercial

Land which is used for commercial purposes, such as but not limited to convenience or comparative retail, personal service, restaurants, or automotive commercial.

Commercial uses occupy 2.9% of the land area and may be located within the C-1, C-2, ARC, or Mid-Rise zoning districts. Map 2 demonstrates that the largest contiguous area of Commercial uses is located along Ann Arbor Road. Recently, the Township has observed redevelopment activity within this area. Smaller commercial developments are dispersed throughout the eastern portion of the Township, and also occur at the intersection of Five Mile Road and Sheldon Road, and at the intersection of Five Mile Road and Beck Road.



Technology & Research

Land which is used for high-technology, research, and prototype development.

Technology & Research uses constitute 2.4% of the land area within Plymouth Township and may be located within the TAR or Mid-Rise zoning districts. The TAR District is located north of M-14 between Ridge Road and Sheldon Road and contains the Metro West Technology Park, which is home to many automotive research businesses, including Johnson Controls, Freudenberg-NOK, and AVL. Also within the TAR District is the Michigan Life Science & Innovation Center, which is a regional incubator for early-stage life science, bio-science, pharmaceuticals, and medical device companies.



Industrial

Land which is used for industrial purposes, such as but not limited to warehousing, manufacturing, assembling, packaging, or testing of products.

Industrial uses claim 14.0% of the land area and are located within the IND District. Map 2 depicts four major industrial land use areas, which generally occur in the northern and eastern portions of the Township. Many of the Industrial uses are located within platted industrial parks. The Metro West Industrial Park, which is located south of Five Mile Road between Beck Road and Sheldon Road, contains over 50 businesses.

Convenient access to the freeways and the CSX Railroad, combined with the local labor force, has made the Township an attractive location for major automotive suppliers, including Tower Automotive, TRAM, and SKF USA, as well as non-automotive businesses including Aunt Millie's Bakery, and Absopure Water. Approximately 555 acres of Industrial-zoned property remains undeveloped, and could accommodate future Industrial growth.



Public/Institutional

Land which is used for public or institutional purposes, such as but not limited to churches, mortuaries, private schools, private golf courses or clubs, utilities, or Township offices or fire stations.

Public/Institutional uses occupy 6.7% of the land area and occur in a variety of zoning districts. The Township Municipal Complex is located along Haggerty Road, north of Ann Arbor Road, and houses Township Hall, the Fire Department, and the Police Department. Another Public/Institutional use is the senior center, known as the Friendship Station, which is located on Schoolcraft Road. The Friendship Station provides a variety of programs for Plymouth Township's active senior population. Also within the Public/Institutional land use category are religious facilities, mortuaries, private schools or clubs, the Wayne County Conservation Club, and utility corridors. The largest Public/Institutional land use is the St. John's Seminary and Golf Course, which is a Planned Unit Development located southeast of Five Mile Road and Sheldon Road.



Recreation/Open Space

Land which is used for recreational purposes, such as Township-owned parks, the Middle Rouge Parkway, developed or undeveloped public school sites, or private open space within a platted subdivision.

Recreation/Open Space uses account for 12.1% of the land area and are dispersed throughout the Township. These uses are primarily located in the PL District. However, the Recreation/Open Space land use category includes private open space located within a subdivision plat and, therefore, Recreation/Open Space land uses also occur within the Single-Family Residential Districts, the TAR District, and the IND District. One of the largest contiguous areas of Recreation/Open Space uses is the Middle Rouge Parkway, which occupies approximately 278 acres in the eastern portion of the Township, and is owned and maintained by Wayne County. Another large Recreation/Open Space area is the Township Park and Hilltop Golf Course site, which occupies approximately 170 acres and is located along Ann Arbor Trail between Beck Road and McClumpha Road. Other areas included within the Recreation/Open Space

land use category are developed or undeveloped public school sites, and private open space within a platted subdivision.

Many of the platted subdivisions within Plymouth Township contain private open space areas. These areas are specifically delineated as a park on the official plat layout of the subdivision, and cannot be utilized for any other purpose. For this reason, private open space areas within a subdivision plat have been included within the Recreation/Open Space land use category.

Key Concepts from the Existing Land Use Study

- ❖ **A pattern has emerged for the Single-Family Residential land uses in which medium-densities occur in the eastern portion of the Township, and lower-densities occur in the western portion of the Township.**
- ❖ **The trend of smaller-scale Single-Family Residential developments is likely to continue.**
- ❖ **The majority of the remaining undeveloped land in the Township is located in the Industrial District.**

Natural Features

The natural features of Plymouth Township help to define the character of the community and contribute to a positive visual image. The topography of the Township is relatively flat in the eastern portion between Sheldon Road and Eckles Road. The soil composition within this area is primarily sandy or loam. To the west of Sheldon Road, the topography becomes more varied and the soil composition is primarily clay. Several small lakes, ponds, and creeks are dispersed throughout the Township, and the Rouge River flows through the northeast portion. Although the majority of land in the Township has been developed, the Township has recognized the benefit of retaining environmentally sensitive areas. Therefore, many natural features have been preserved and incorporated into development projects.

Wetlands & Wooded Areas

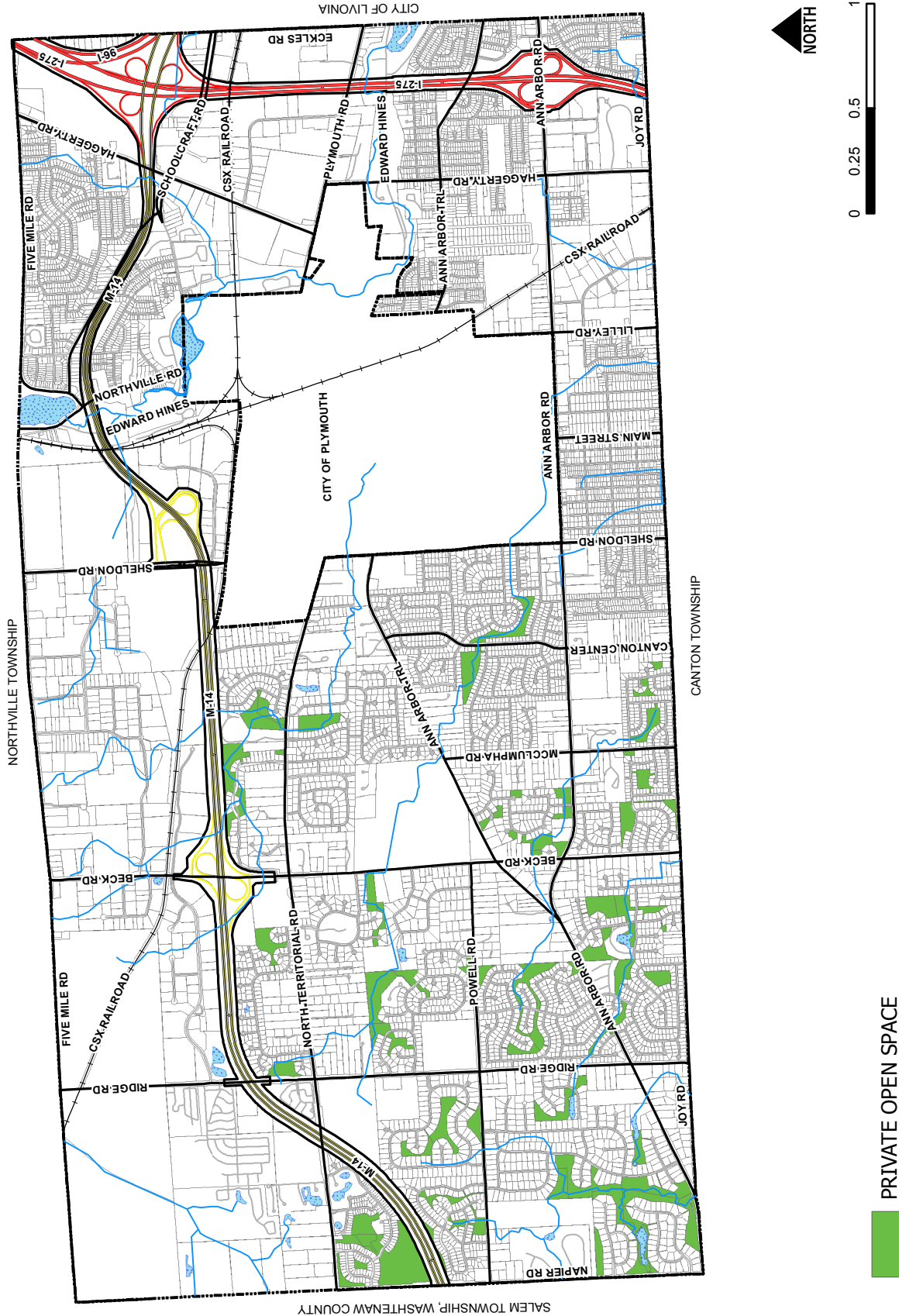
Some wetland areas in the Township are regulated by the Michigan Department of Environmental Quality (MDEQ). In general, the MDEQ regulates wetlands located within 500 feet of an inland pond, lake, river, or stream, or any wetland area that is greater than 5 acres. Plymouth Township, however, does not regulate wetlands and wooded areas in the traditional sense.

The Township Zoning Ordinance requires that any significant natural features located on the property being proposed for development, including trees, open waterways, steep slopes, and wetlands, must be documented during the Site Plan Review process. The Township evaluates the significance of the natural feature and determines the appropriate treatment on a case-by-case basis. The Township has often encouraged the use of a Development Option, which acts as an overlay on the property being proposed for development, and allows the layout of the site to be modified in order to retain natural features and create open space. This policy has been successfully implemented in several single-family residential developments and has led to substantial quantities of private open space throughout the Township (see Map 3: Plymouth Township – Private Open Space in Single-Family Subdivisions).

Floodplain

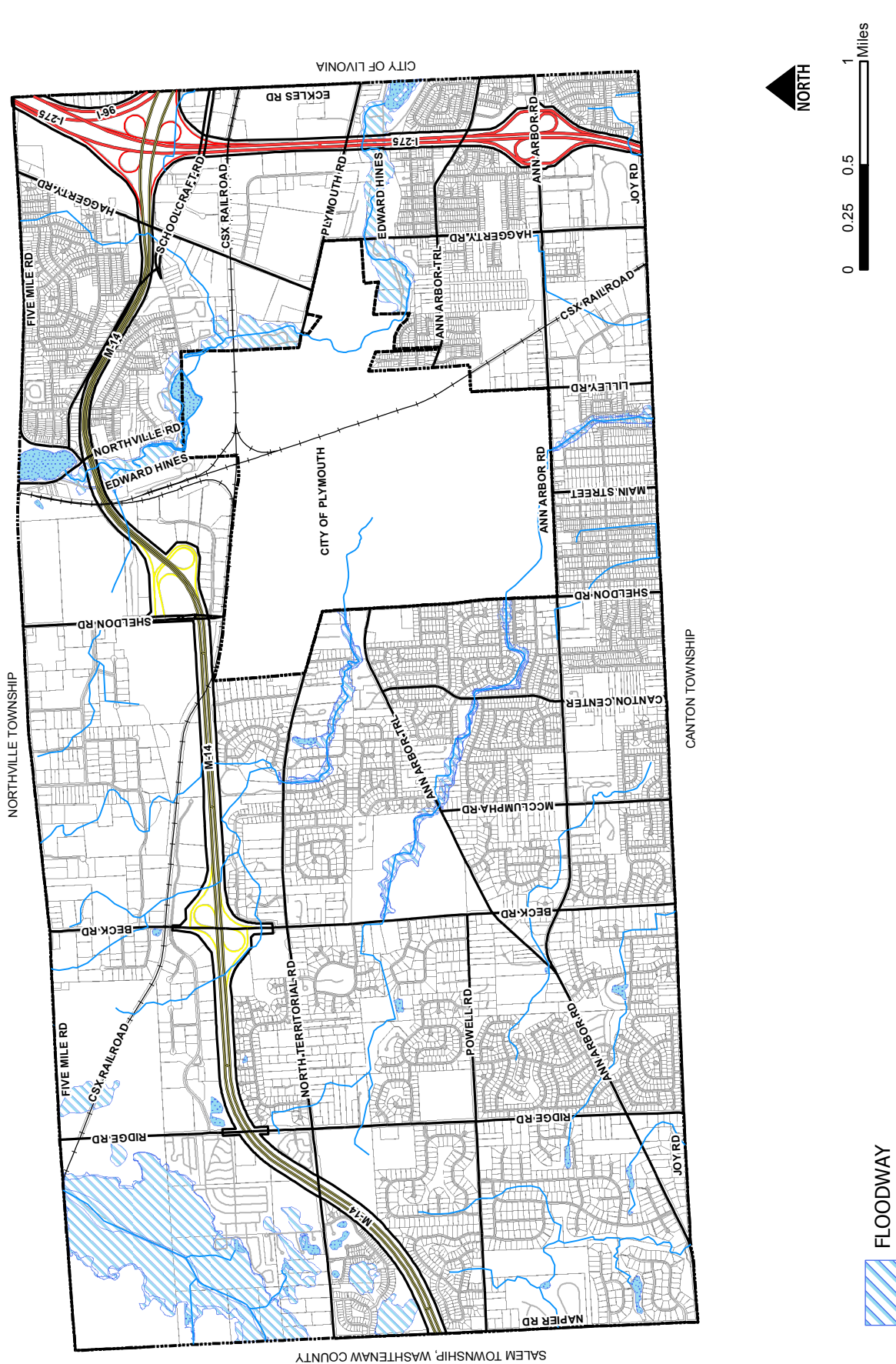
The Township has established a floodplain overlay district in order to maintain the natural water carrying capacity of the floodway areas (see Map 4: Plymouth Township – Floodway Areas). The boundaries of the district are based upon the Flood Insurance Rate Map (FIRM), established by the Federal Emergency Management Agency (FEMA). In general, development within the floodway areas is prohibited.

Map 3: Plymouth Township - Private Open Space in Single-Family Subdivisions



Source: Plymouth Township GIS

Map 4: Plymouth Township - Floodway Areas



Source: Plymouth Township GIS

As a community that is mostly “built out,” one of the challenges that the Township faces is ensuring that redevelopment projects fit into the context of the existing environment. The preservation of natural features is one technique that may be used to create a transition between land uses, and also contributes to the overall image of the community.

Key Concepts from the Natural Features Study

- ❖ **The Township has been able to encourage the incorporation of natural features into developments through the use of Development Options.**
- ❖ **Natural features are important to maintaining a positive visual image of the community.**

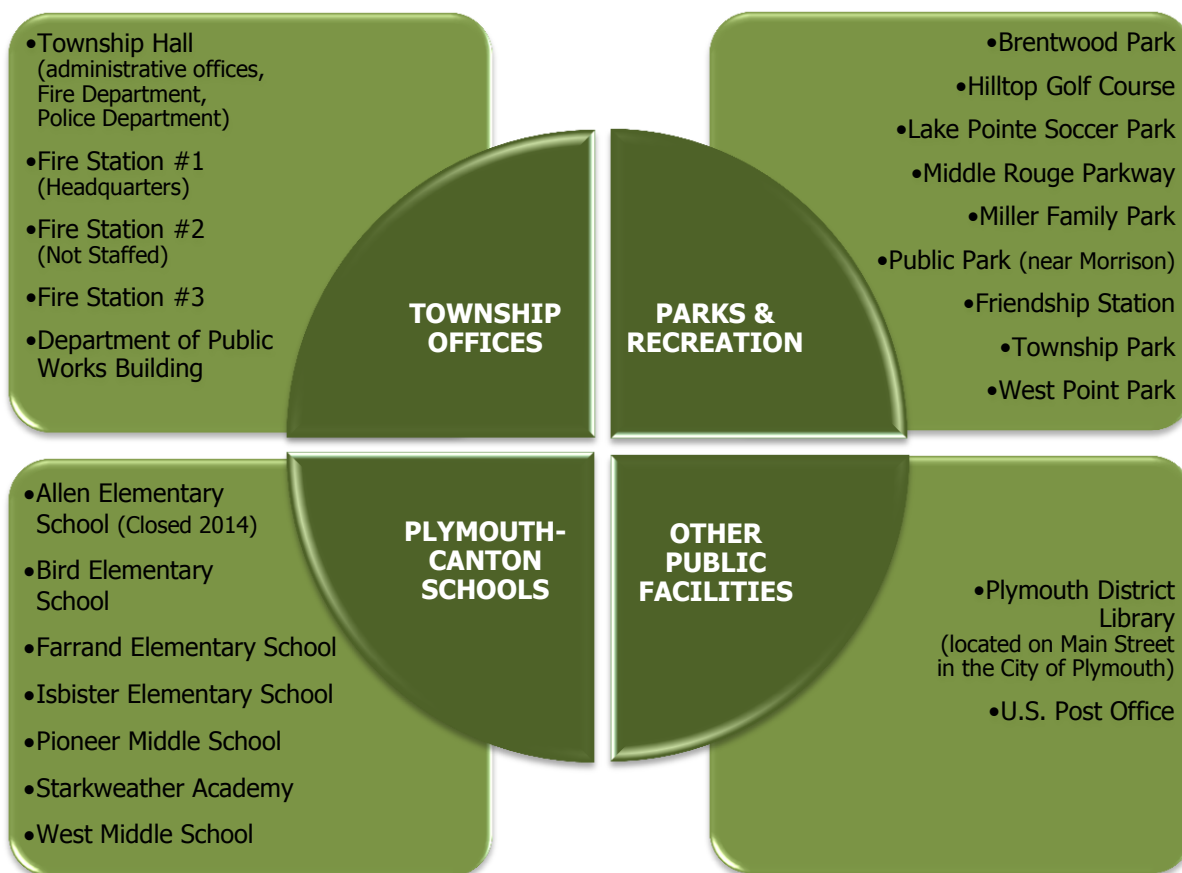
Community Services & Infrastructure

The presence of community services and the accessibility of the transportation network are among the many factors considered when an individual chooses a location for a home or a business. In the case of residential development, the quality of the local schools and recreation opportunities may attract potential homebuyers. Public safety and other services also contribute to the desirability of a community for all types of development. Within the context of the Master Plan for Land Use, it is important to recognize the impact that community services and infrastructure may have on the physical development of the community, and identify any potential barriers for future growth. This section explores the presence of community services and associated facilities, access to public utility systems, and the transportation network.

Community Services & Facilities

The need for public safety and other services has grown along with the community. In the early 1950's, Plymouth Township had a volunteer fire department, which later transitioned to the Plymouth Community Fire Department. For many years, this department provided fire protection services to both Plymouth Township and the City of Plymouth. When the City of Plymouth withdrew from the joint fire department in 2011, Fire Station #2, which is located along Wilcox Road, was closed. Fire protection services are currently provided by the Plymouth Township Fire Department. Police services were provided by Wayne County, until the Plymouth Township Police Department was formed in 1985.

Plymouth Township provides a variety of facilities for public safety, as well as administrative functions and other community services. These facilities are identified below and depicted on Map 5 (see Map 5: Plymouth Township – Community Facilities).



Township Offices



In 2006, the construction of the Township Municipal Complex was completed in order to provide residents with a single location from which all administrative offices are accessible. The Township Municipal Complex houses Township Hall, the Fire Department, and the Police Department. The facility also contains meeting rooms, which may be reserved by homeowner associations and non-profit organizations.

The Plymouth Township Fire Department operates from Fire Station #1, which is the headquarter building located adjacent to the Township Municipal Complex, and Fire Station #3, which is located northeast of North Territorial Road and Beck Road. The Fire Department staff includes 18 full-time firefighter/paramedics and 7 part-time firefighters, who service the community through fire suppression and investigation, rescue operations, paramedic services, hazardous material services, emergency

management, and environmental emergency mitigation. The Fire Department also provides safety programs for children and senior groups.

The Plymouth Township Police Department headquarters are located within the Township Municipal Complex and the department staff includes 28 full-time sworn officers and 11 dispatchers. The Police Department is responsible for crime prevention and investigation, traffic law enforcement, and accident investigation. The department also offers a variety of safety programs including T.E.A.M. (Teaching, Education, And Mentoring) which is a crime prevention program designed for middle-school children.

Other Township offices include the Department of Public Works building, which is located on Port Street. This facility is used by the Department of Public Works field crew for maintenance activities and equipment storage.



Parks & Recreation



Over the years, the Township has expanded the recreation opportunities available to Township residents. The Amrhein farm property was purchased in 1969 and developed into Township Park, which is located adjacent to an 18-hole golf course known as the Hilltop Golf Course. Township Park features baseball diamonds, a sledding hill, a sprayscape, play structures, a fishing pond, walking paths, and pavilion and shelter facilities.

The Township has also developed several smaller parks; two of the most popular are the Lake Pointe Soccer Park, which is located northwest of Haggerty Road and Schoolcraft Road, and the Miller Family Park, which is located along Ann Arbor Trail. The Lake Pointe Soccer Park provides two soccer fields, a pathway system, and a shelter with restroom facilities. The Miller Family Park offers play structures and a large open play area for children. Township residents also have access to the Middle Rouge Parkway, which meanders through the eastern portion of the Township and provides a variety of recreation opportunities, including play structures, baseball diamonds, picnic areas, pathways, shelters with restroom facilities, and natural open space areas. The Middle Rouge Parkway is owned and maintained by Wayne County.

For the older adults, the Friendship Station provides a variety of activities for seniors including card games, line dancing, and group dinners.



Plymouth-Canton Schools



Plymouth Township is serviced by an excellent public school system. The Plymouth-Canton Community School District currently operates three elementary schools (Allen Elementary School was closed in 2014), two middle schools, and one alternative school within the boundaries of the Township. The school district also owns undeveloped property at the northeast corner of Powell Road and Ridge Road. The property contains an existing wooded area, which has become known as the Miller Woods.



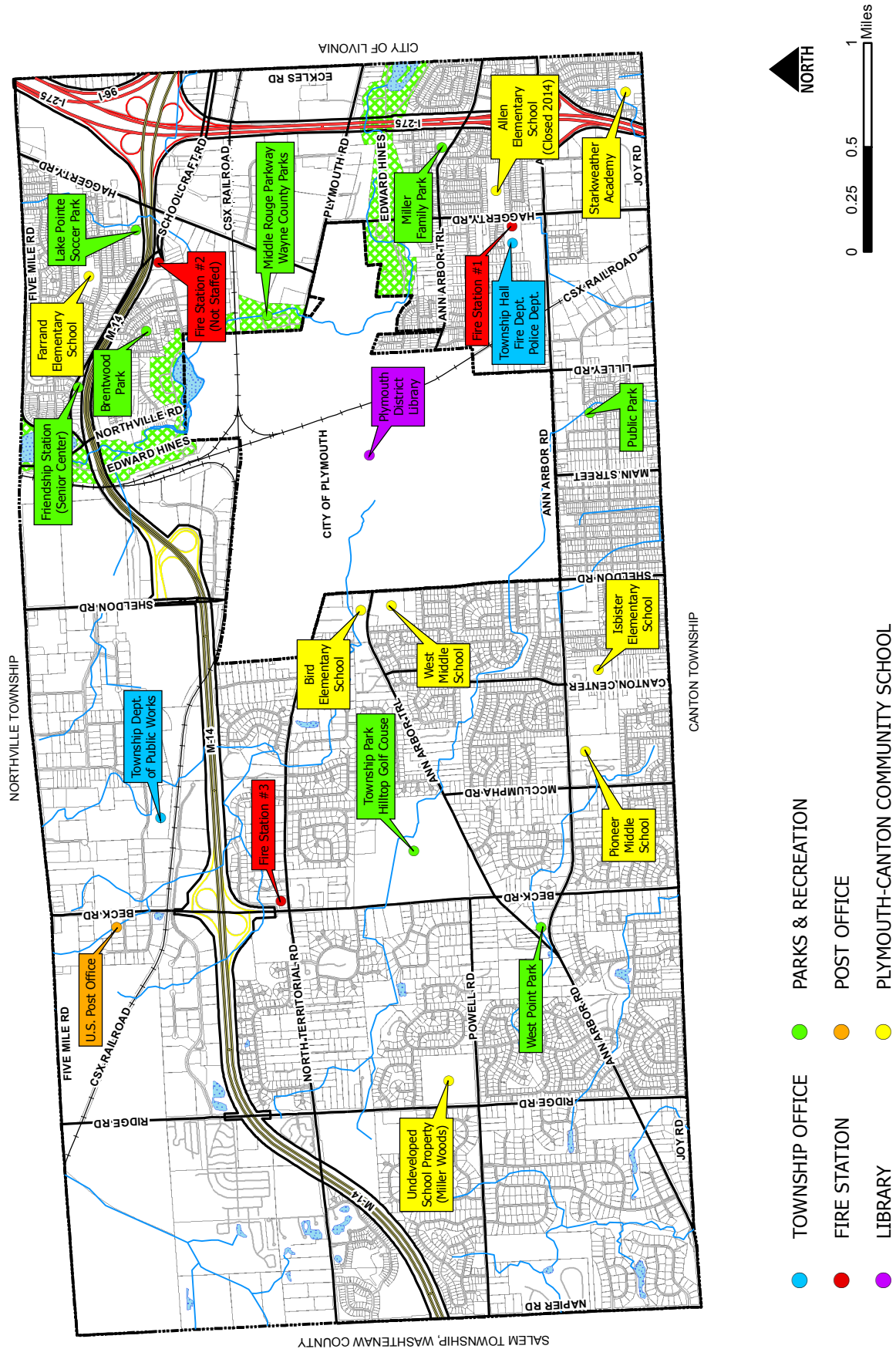
Other Public Facilities



Other public facilities available to Township residents include the Plymouth District Library and the U.S. Post Office. The library is located on Main Street in the City of Plymouth, and was established as a joint venture between Plymouth Township and the City of Plymouth in 1985. The library offers a wide array of books, magazines, books on tape, DVDs, video games, digital e-books, and e-audiobooks.

The U.S. Post Office provides services from a facility located northwest of Clipper Street and Beck Road.

Map 5: Plymouth Township - Community Facilities



Source: Plymouth Township GIS

Public Utility Systems

Access to public utility systems is another factor which may impact the potential for future growth in Plymouth Township. The rapid growth experienced in the 1960's prompted significant capital improvement projects, which led to the extension of a reliable water system and sanitary sewer system throughout the community. In 1961, a connection was made to the Detroit water system, and plans for the construction of a Township watermain were completed in 1968. The first major sanitary sewer improvements coincided with the construction of the Lake Pointe Village subdivision, which was completed in 9 phases between 1957 and 1966.

The Township Department of Public Works is responsible for maintaining the water and sanitary sewer systems. Conversely, the storm sewer system is not a Township-owned system. Depending upon the location, stormwater management facilities may be under the jurisdiction of Wayne County, the State of Michigan, or a private association.

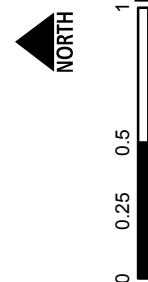
Water

All municipally supplied water in Plymouth Township comes from the Detroit River. The Township is connected to the Detroit water system in the following locations: 1) Joy Road and Rocker Avenue, 2) Five Mile Road and Sheldon Road, and 3) Joy Road and Ridge Road. Water is dispersed from the three master locations to individual sites. In order to adequately service the areas of the Township with varying elevations, the Township water supply is divided into two pressure zones. The higher elevation areas are part of the Five Mile Road Tank District, and the lower elevation areas are part of the Lake Pointe Tank District.

The Township water system includes over 174 miles of water main and two water towers. One tower, the Five Mile Road Tank, is located southwest of Five Mile Road and Beck Road. The other water tower, the Lake Pointe Tank, is located along Wilcox Road, south of Schoolcraft Road. The existing water system is illustrated on Map 6 (see Map 6: Plymouth Township – Water System).

Map 6 indicates that the existing water system has been extended to most of the developed areas of the community and should be capable of meeting the future demand for service. One area that may be challenged is the undeveloped property located south of Five Mile Road between Napier Road and Ridge Road, due to the distance to the nearest water main connection point. The extension of water service to this area will need to be addressed when the property is developed.

● WATER TOWER
— WATER PIPE



Source: Plymouth Township GIS

Sanitary Sewer

The Township sanitary sewer service was greatly expanded during the 1970's and 1980's, in order to support the development of new single-family residential subdivisions and industrial parks. In general, the sanitary sewer projects were privately financed by the developer.

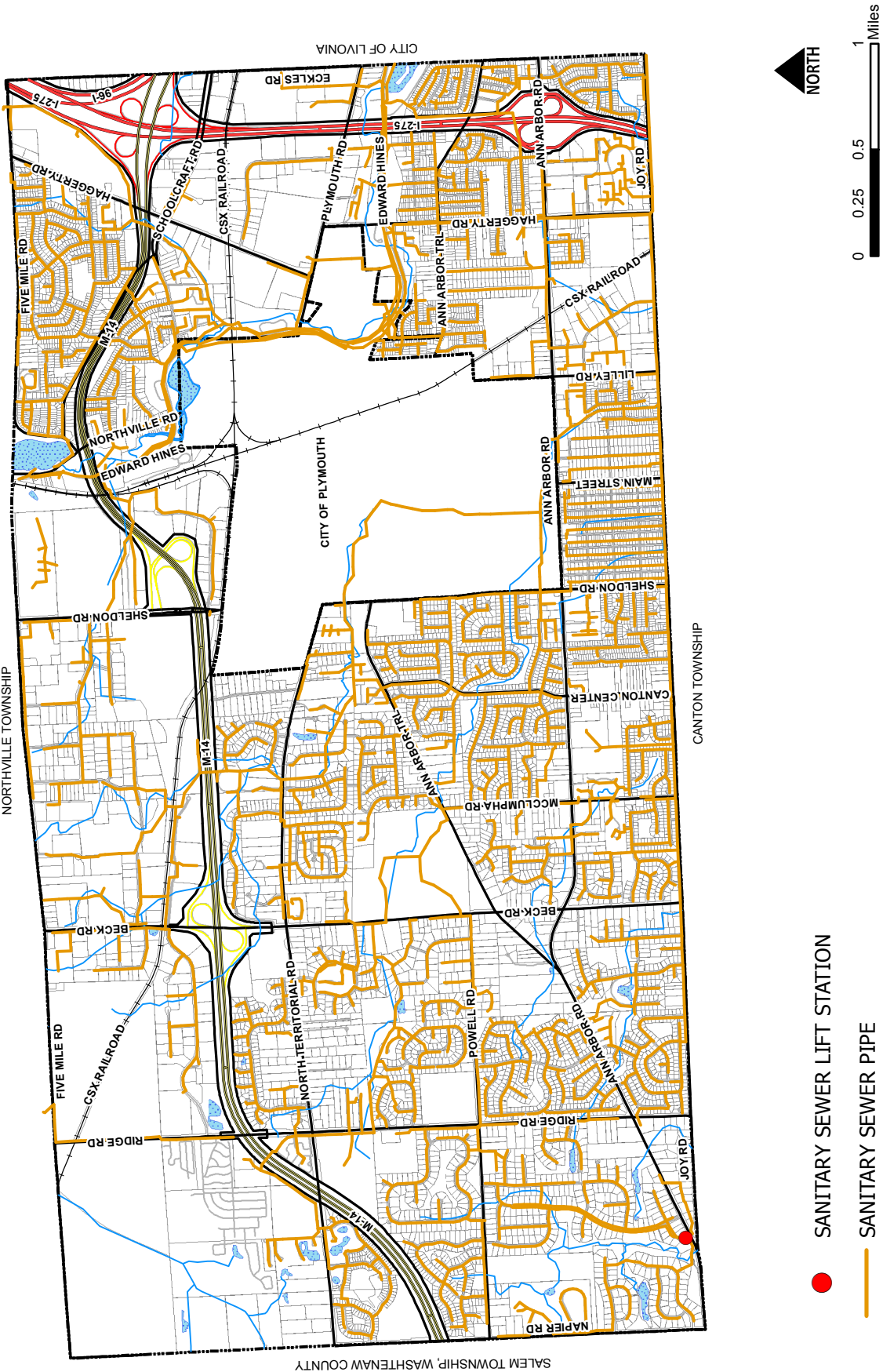
The Township sanitary sewer system includes over 140 miles of sanitary sewer and a lift station, which is located in the western portion of the Township. The sanitary sewer system discharges to the Wayne County Middle Rouge Interceptor Sewers, which are located within the Rouge Parkway and along Haggerty Road and Joy Road. The Township is restricted in the amount of wastewater that can be discharged into these sewers. In order to ensure that the future sanitary sewer needs of the Township would be met, Plymouth Township joined Canton Township and Northville Township in forming a sanitary sewer and wastewater treatment authority, known as the Western Townships Utility Authority (WTUA) in 1986. Through WTUA, the three member communities have financed and constructed a regional wastewater collection and transportation system to increase the sanitary sewer capacity available to each community. The WTUA system transports wastewater to the Ypsilanti Community Utilities Authority (YCUA) treatment plant, which is located in Ypsilanti, and also to the Detroit Water and Sewerage Department (DWSD) treatment plant. The existing sanitary sewer system is depicted on Map 7 (see Map 7: Plymouth Township – Sanitary Sewer System).

Map 7 reveals that the existing sanitary sewer service is available to virtually all of the developed portions of the Township. In addition, major trunk lines are in place to accommodate future extensions to undeveloped areas, including the undeveloped property located south of Five Mile Road between Napier Road and Ridge Road.

Stormwater

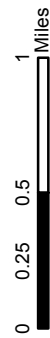
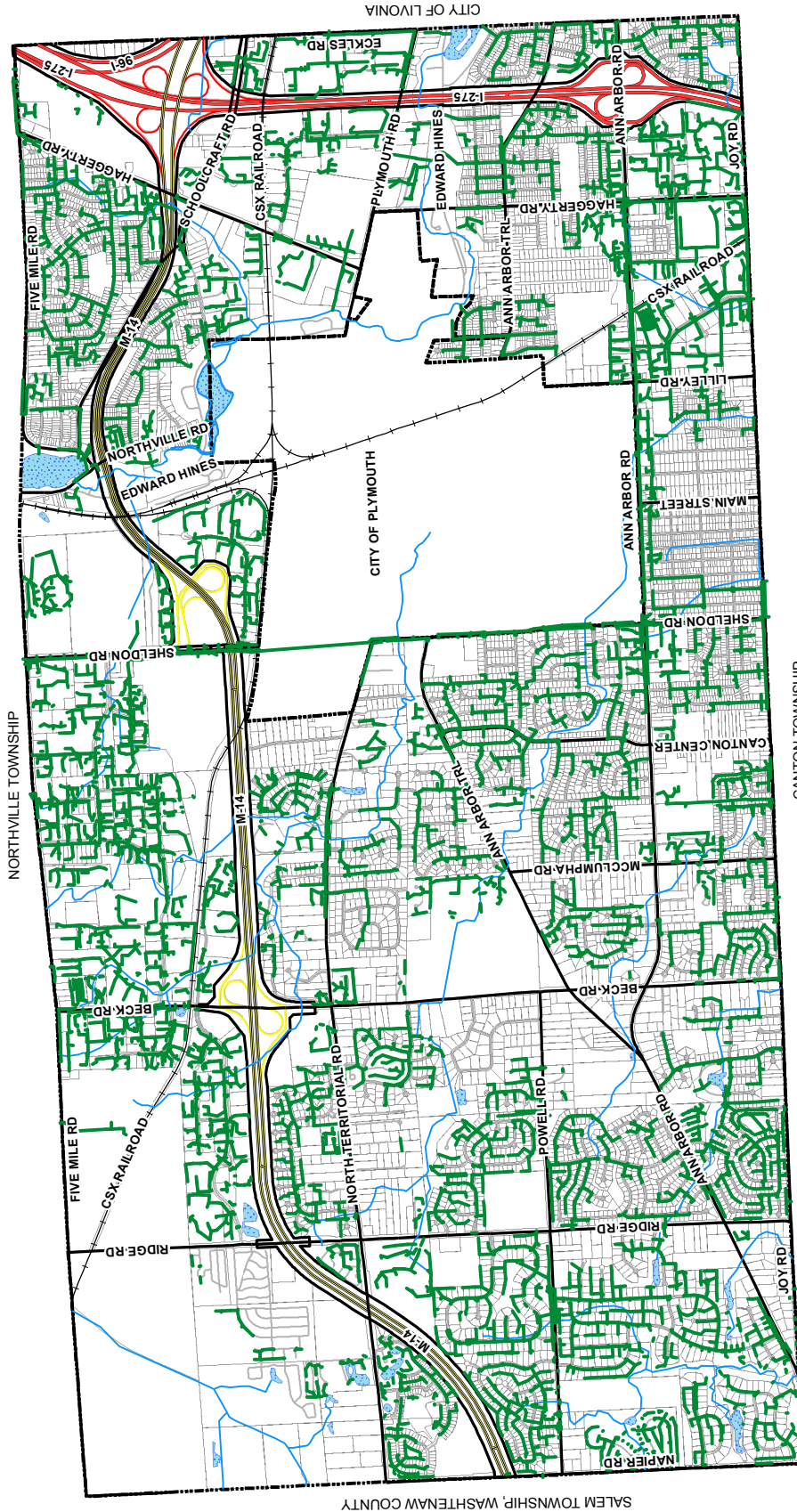
Each new development in Plymouth Township must provide facilities for managing the stormwater runoff associated with the development of the property. The proposed stormwater management facility must be designed to discharge stormwater runoff at the same rate as undeveloped or agricultural land. In most cases, stormwater runoff is held on-site in a pond and then discharged, at an agricultural rate, to a public drain or a natural watercourse. Although the stormwater system is not a Township-owned utility system, the Department of Public Works attempts to maintain data regarding the location of storm sewer pipes in Plymouth Township, as shown on Map 8 (see Map 8: Plymouth Township – Storm Sewer System).

Map 7: Plymouth Township - Sanitary Sewer System



Source: Plymouth Township GIS

Map 8: Plymouth Township - Storm Sewer System



— STORM SEWER PIPE

Source: Plymouth Township GIS

Transportation

The transportation network has played a significant role in shaping the existing development pattern of Plymouth Township, and also affects the type of development which may occur in the future. It is important that the Township continues to consider the intended function of a roadway and opportunities for non-motorized transportation paths, when making land use and development decisions.

As a charter township, Plymouth Township does not have jurisdiction over roads. The state trunk line system, which includes Ann Arbor Road and the I-275 and M-14 freeways, is under the jurisdiction of the Michigan Department of Transportation (MDOT). The major roads, which connect to the state trunk line system and provide access throughout the Township, are under the jurisdiction of Wayne County. The following is a description of each type of roadway, and its intended function, in Plymouth Township. Map 9 depicts the future planned function of the major roads (see Map 9: Plymouth Township – Future Right-of-Way).

Freeway

The freeways are designed to accommodate large volumes of high-speed traffic over long distances, or between urban areas.

Super Highway

The super highways connect the Township to nearby communities and are designed to carry relatively high volumes of traffic. Super highways are located within a 204-foot right-of-way with a central median.

Major Thoroughfare

The major thoroughfares connect the Township to nearby communities and are designed to carry relatively high volumes of traffic. Major thoroughfares are located within a 120-foot right-of-way.

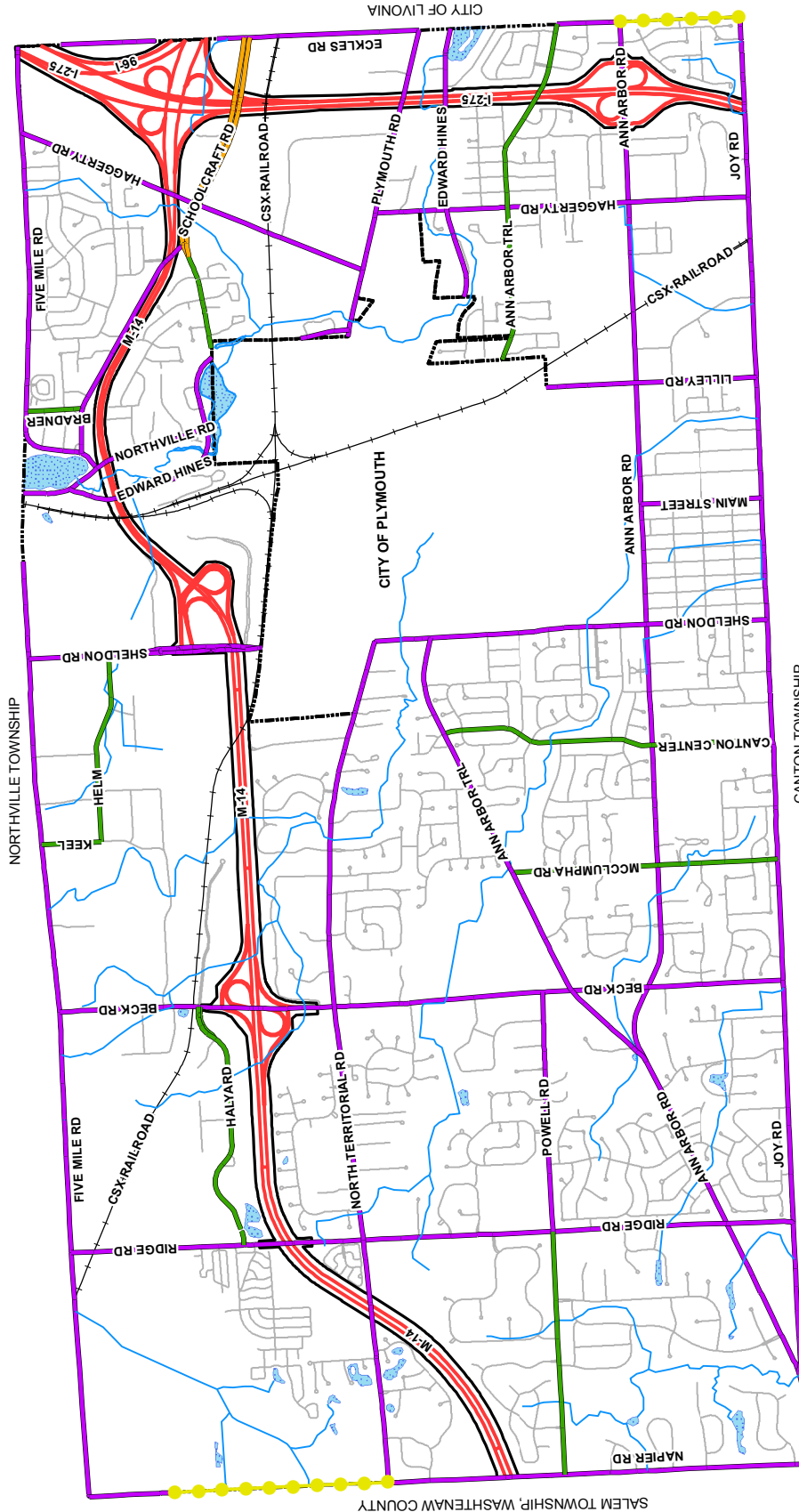
Collector Road

The collector roads connect local streets to the major thoroughfares and are designed to accommodate moderate traffic volumes over short distances. Collector roads are located within an 86-foot right-of-way.

Local Street

The local streets connect individual properties and homes to larger roads and include internal public streets within a platted subdivision, or private streets within a condominium development. Local streets are located within a 60-foot right-of-way.

Map 9: Plymouth Township - Future Right-of-Way



FREEWAY

SUPER HIGHWAY (204FT ROW)

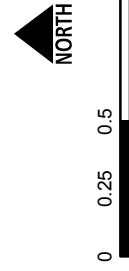
MAJOR THOROUGHFARE (120FT ROW)

COLLECTOR ROAD (86FT ROW)

LOCAL STREET (60FT ROW)

FUTURE THOROUGHFARE (120FT ROW)

* No information from MDT was available regarding the future ROW of Ann Arbor Road. The Township considers Ann Arbor Road to be a major thoroughfare and requires development along Ann Arbor Road to be based upon a street setback of 60 feet from the centerline of the road, except for the area between Rocker Ave. and General Dr., which is based upon a street setback of 53 feet.



Source: Plymouth Township GIS
Wayne County & Township Records (Data)

The roadways shown on Map 9 have been classified according to data provided by Wayne County and Plymouth Township records. The Wayne County Right-of-Way Master Plan designates a section of Napier Road, and a section of Eckles Road as a "Future Thoroughfare." These sections are highlighted in yellow on Map 9. The future thoroughfares may be developed at some point in the future, if a change in conditions warrants the development.

It is anticipated that future improvements to the transportation network will primarily consist of pavement widening and signalization improvements on the existing major roads. As improvements to the transportation system are being proposed, the Township should coordinate with SEMCOG and Wayne County to enhance pedestrian connectivity. Non-motorized transportation paths provide a direct means for promoting community health. Many of the major thoroughfares include a 5-foot sidewalk within the road right-of-way. However, there are some gaps within the existing sidewalk network. The Township should continue to recognize the relationship between non-motorized paths and community health and complete a detailed inventory of the pathway system to provide safe, non-motorized routes from neighborhoods that would connect to parks, schools, and other areas.

Because Plymouth Township does not have jurisdiction over roads, it is critical that the Township continues to work cooperatively with Wayne County and the MDOT, and inform these agencies of any traffic or circulation issues observed at the local level. Data regarding the traffic volume and the number of accidents for a given roadway may be used to facilitate discussions.

Traffic Volume

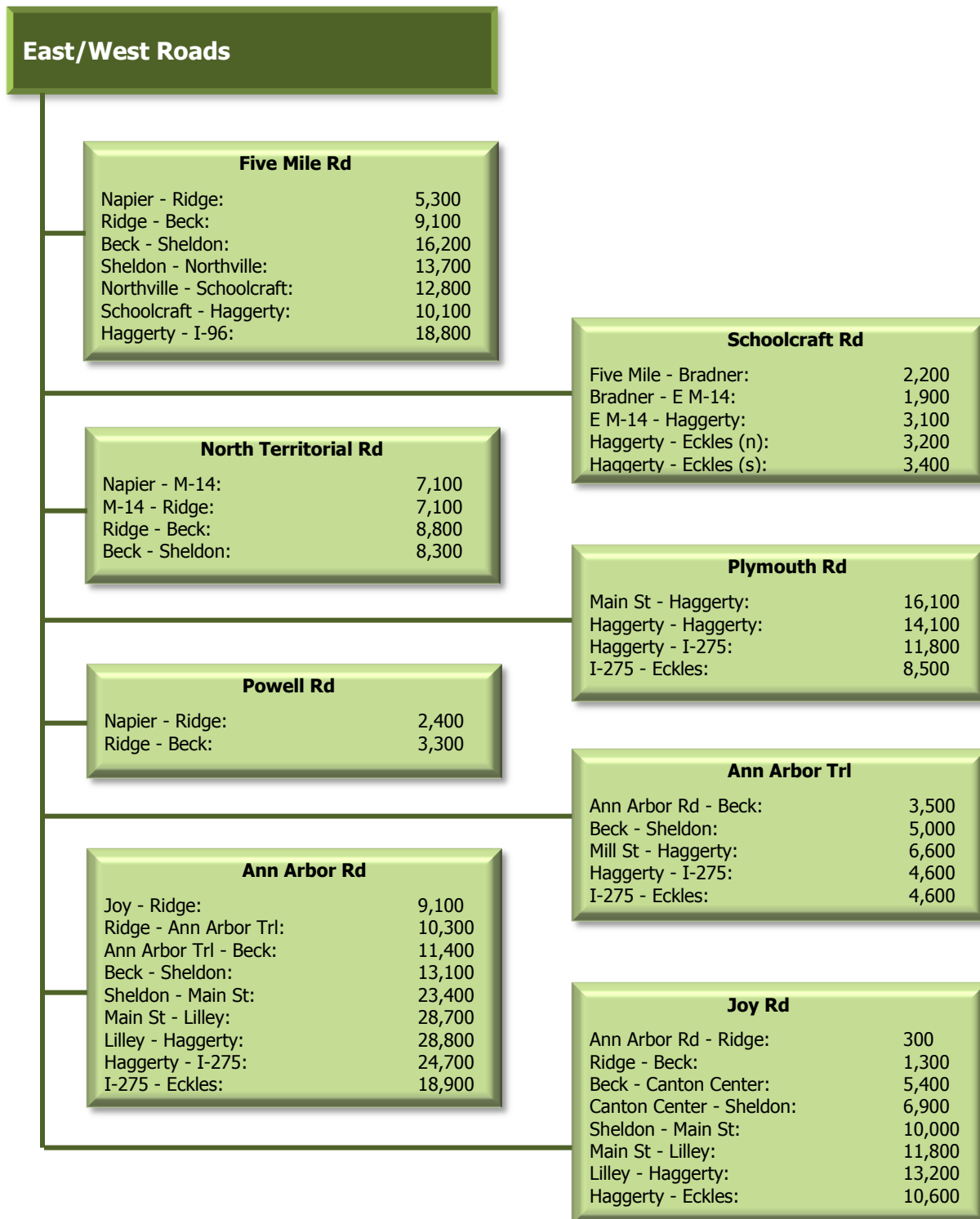
The Level of Service (LOS) is a commonly used standard for measuring the traffic delay of a road segment. The LOS thresholds range from LOS A, which represents free-flowing traffic conditions, to LOS F, which represents congested traffic conditions. Although a full traffic analysis has not been performed for the Township transportation network, the recorded traffic volume of a road segment may identify potential congestion points.

Traffic volume is measured according to the average annual daily traffic (AADT), which is the total yearly traffic volume of a given roadway divided by the number of days per year. The AADT is based upon actual traffic counts observed at various segments of a road. The Southeast Michigan Council of Governments (SEMCOG) Road Network Report provides the 2012 traffic volume of the major roads in Plymouth Township.

According to the SEMCOG report, the highest traffic volume was recorded along Beck Road between Five Mile Road and M-14. The 2012 AADT for this segment was 45,400. However, south of the M-14 interchange, the traffic volume along Beck Road dropped significantly. The 2012 AADT for the segment of Beck Road between M-14 and North

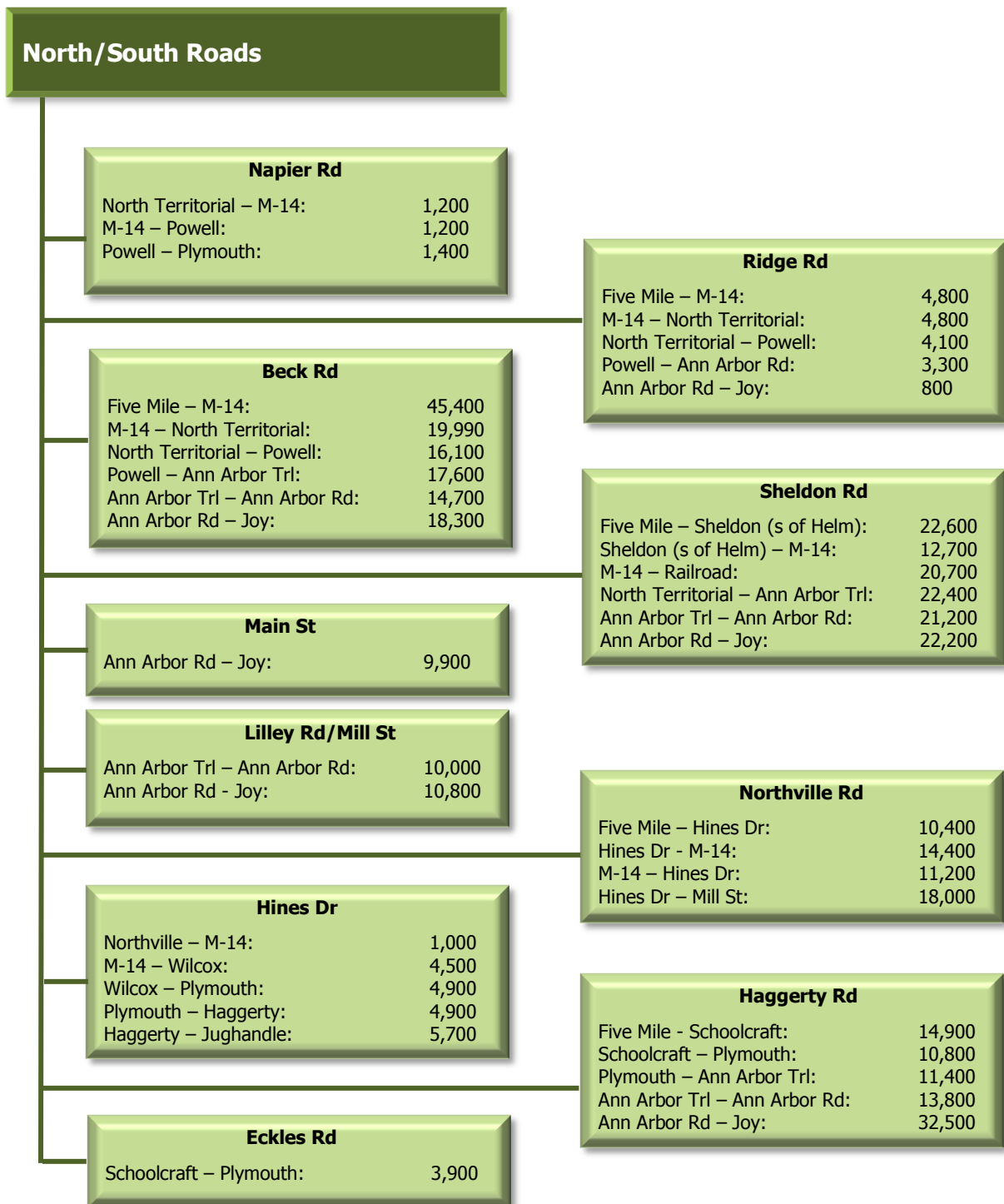
Territorial Road was 19,990. This would appear to emphasize the regional significance of the segment of Beck Road between Five Mile Road and M-14. The road segments which claimed the second and third highest traffic volumes were Haggerty Road between Ann Arbor Road and Joy Road with an AADT of 32,500, and Ann Arbor Road between Lilley Road/Mill Street and Haggerty Road with an AADT of 28,880. Figure 21.1 and Figure 21.2 contain a detailed breakdown of the AADT for each of the major east/west roads and north/south roads, and Map 10 illustrates the AADT on a generalized map (see Figure 21.1 and Figure 21.2: Plymouth Township – 2012 Average Annual Daily Traffic (AADT) by Road Segment & Map 10: Plymouth Township – Traffic Volume).

Figure 21.1: Plymouth Township – 2012 Average Annual Daily Traffic (AADT) by Road Segment



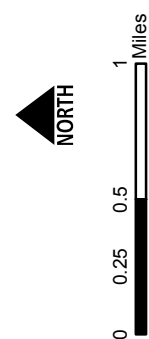
Source: 2012 SEMCOG Road Network Report

Figure 21.2: Plymouth Township – 2012 Average Annual Daily Traffic (AADT) by Road Segment



Source: 2012 SEMCOG Road Network Report

TRAFFIC VOLUME (0 - 9,999)	TRAFFIC VOLUME (30,000 - 39,999)
TRAFFIC VOLUME (10,000 - 19,999)	TRAFFIC VOLUME (40,000 - 49,999)
TRAFFIC VOLUME (20,000 - 29,999)	



**Source: Plymouth Township GIS
2012 SEMCOG Road Network Report (Data)**

Number of Accidents

Accident data for the major road intersections may be used to identify potential circulation issues. Figure 22 identifies the top 10 high-frequency crash intersections in Plymouth Township between 2009 and 2013, and Map 11 identifies each location on a map (see Figure 22: Plymouth Township – Top 10 High-Frequency Crash Locations).

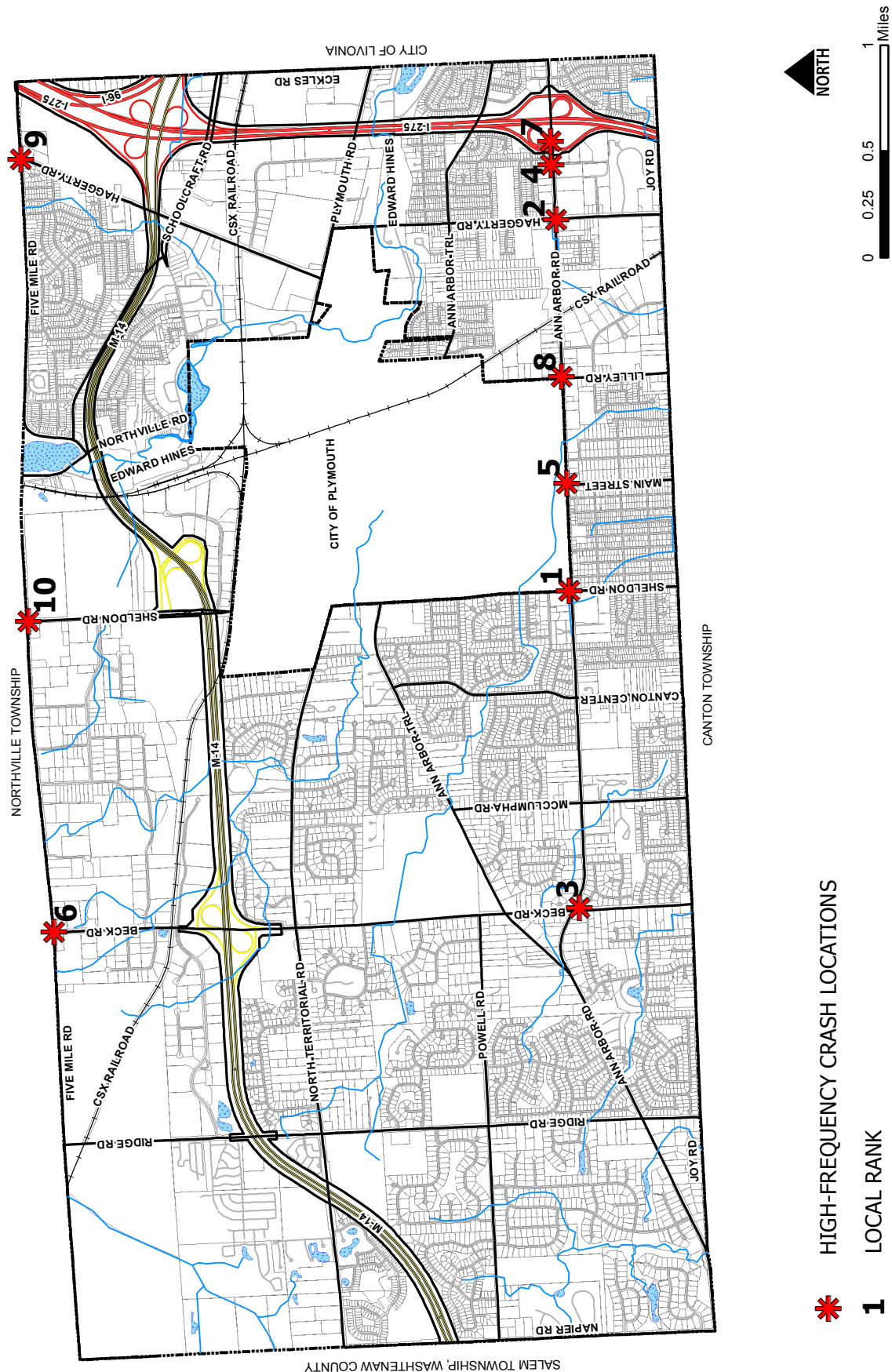
Figure 22: Plymouth Township – Top 10 High-Frequency Crash Locations

	Local Rank	County Rank	5-Year Total Crashes (2009-2013)	Avg. Annual Crashes (2009-2013)
Ann Arbor Rd & Sheldon Rd	1	5	215	43.0
Ann Arbor Rd & Haggerty Rd	2	42	123	24.6
Beck Rd & Ann Arbor Rd	3	112	89	17.8
Ann Arbor Rd & Massey Dr	4	112	89	17.8
Ann Arbor Rd & Main St	5	147	80	16.0
Beck Rd & Five Mile Rd	6	157	78	15.6
Ann Arbor Rd & I-275 S Ramp	7	157	78	15.6
Ann Arbor Rd & Mill St	8	174	74	14.8
Five Mile Rd & Haggerty Rd	9	230	66	13.2
Sheldon Rd & Five Mile Rd	10	291	59	11.8

Source: SEMCOG Community Profiles

In general, the greatest number of accidents in Plymouth Township occurred on Ann Arbor Road. In particular, the intersection of Ann Arbor Road and Sheldon Road has experienced an average of 43.0 accidents per year from 2009 to 2013, and is ranked 5 among the high-frequency crash locations at the county level.

Map 11: Plymouth Township - Top 10 High-Frequency Crash Locations



Source: Plymouth Township GIS

Future Transportation Improvements

SEMCOG is responsible for developing the long-range transportation plan, and coordinating the use of federal transportation dollars for the Southeast Michigan region. The 2014 Transportation Improvement Program (TIP) includes three projects within the boundaries of Plymouth Township. One project involves the reconfiguration of Beck Road to include a center left turn lane. The Plymouth Township portion would include Beck Road from Ann Arbor Road to Joy Road. The center left turn lane would also be extended south of Joy Road to Warren Road in Canton Township. Other projects included in the TIP involve replacing the M-14 freeway bridge above Edward Hines Drive, and resurfacing the I-275 freeway. The Plymouth Township portion of the I-275 freeway project would extend from Five Mile Road to Joy Road.

Outside of the TIP, Plymouth Township can help to reduce vehicle conflicts and improve the traffic flow along major roads through proper access management. The Township should continue to enforce the zoning regulations, which place limitations on the number and spacing of curb cuts, and encourage shared access between sites. The Township should also make an effort to coordinate with Wayne County and the MDOT to resolve traffic flow issues, which may result from forced lane shifting or unclear road pavement markings, when observed at the local level. These policies will facilitate the smooth and efficient flow of vehicles throughout the Township.

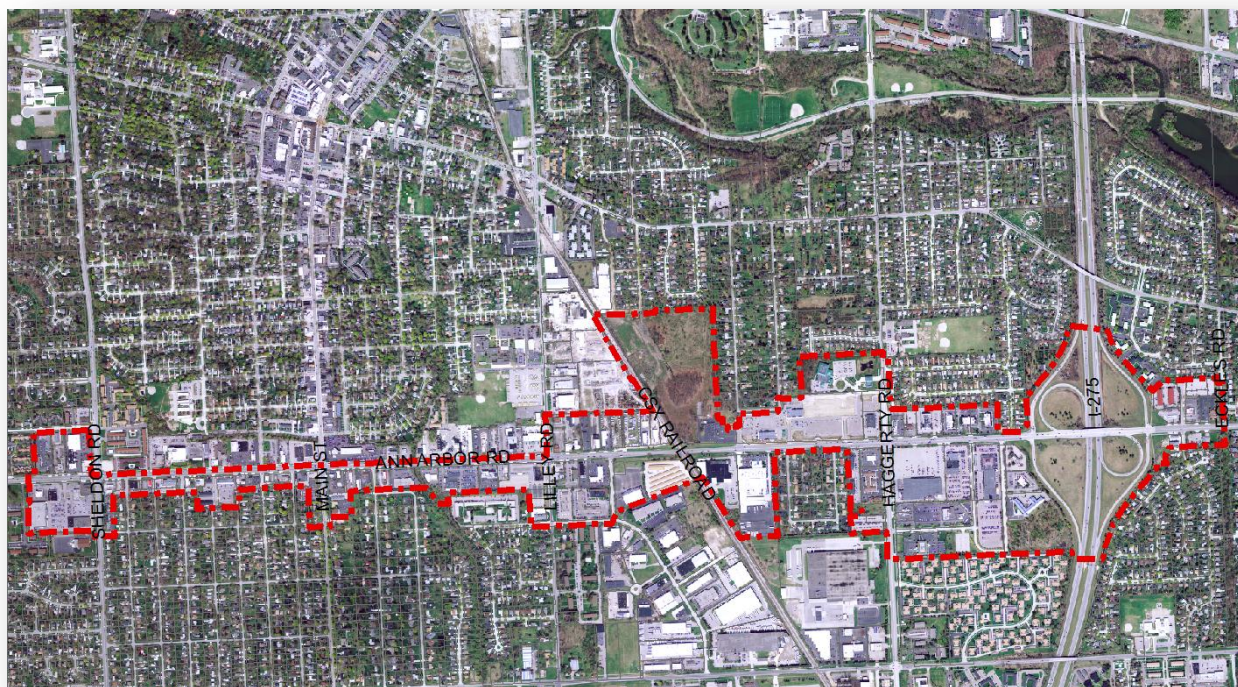
Key Concepts from the Community Services & Infrastructure Study

- ❖ **The presence of community services and infrastructure contributes to the desirability of Plymouth Township.**
- ❖ **The Township water and sanitary sewer systems have been extended throughout the vast majority of the Township. No major barriers for future growth have been observed.**
- ❖ **Non-motorized paths provide a direct means for promoting community health.**
- ❖ **The major road network is already in place. It is critical that the Township continues to work cooperatively with Wayne County and the MDOT, and communicate any traffic or circulation issues observed at the local level.**

Sub-Area: Ann Arbor Road Corridor

As the prime commercial thoroughfare in Plymouth Township, the Ann Arbor Road Corridor has been recognized as a key focal area of the community. The boundary of the Ann Arbor Road Corridor Sub-Area follows the boundary of the Plymouth Township Downtown Development Authority District. In general, the Ann Arbor Road Corridor Sub-Area extends from Eckles Road to Marguerite Drive, which is located west of Sheldon Road (see Figure 23: Boundary of the Ann Arbor Road Corridor Sub-Area).

Figure 23: Boundary of the Ann Arbor Road Corridor Sub-Area



Source: Plymouth Township GIS

The north side of Ann Arbor Road between Lilley Road/Mill Street and Sheldon Road is located within the City of Plymouth. In 1998, Plymouth Township and the City of Plymouth formed a joint Ann Arbor Road Corridor (ARC) District, which contains specific criteria for landscape, signage, and the appearance of buildings. The purpose of the joint zoning district was to create a visual cohesiveness on both sides of Ann Arbor Road and to foster a sense of place. To that end, the Township Downtown Development Authority (DDA) has financed major streetscape projects along the Township portion of the Ann Arbor Road Corridor. It is the Township's perspective

that continued investment in the Ann Arbor Road Corridor will help to prevent blight and ensure that this area remains a viable location for business.

Existing Conditions

The Ann Arbor Road Corridor Sub-Area is intersected by five major roads as well as the I-275 freeway interchange and the CSX Railroad overpass. Local streets intersect the portion of Ann Arbor Road between Sheldon Road and Main Street, and also west of Main Street at Rocker Avenue. The local streets connect to the single-family residential area immediately to the south of the Sub-Area. The Tonquish Creek also crosses Ann Arbor Road between Main Street and Lilley Road/Mill Street. For the most part, overhead utility lines are not located along the frontage of the Township portion of the Ann Arbor Road Corridor.

The existing mix of land uses within the Sub-Area is primarily commercial, but office and industrial uses are also present. The Zoning Ordinance permits uses of a light industrial nature only within the vicinity of the CSX Railroad overpass. There is considerable variation in the design and appearance of the older buildings within the Sub-Area. However, the Township has been able to improve the visual continuity in the architectural design and appearance of buildings being proposed for redevelopment. Many of the infill or redeveloped sites feature brick buildings with accent materials, as demonstrated in the photograph in Figure 24 (see Figure 24: Redeveloped Site within the Sub-Area).

Figure 24: Redeveloped Site within the Sub-Area



Source: Plymouth Township

The depth of commercial development within the Ann Arbor Road Corridor Sub-Area is generally greater than 300 feet, with the exception of the area between Sheldon Road and Main Street. This area was originally platted to have lots of approximately 25 feet in width and 100 feet in depth along the frontage of Ann Arbor Road. A 20-foot alley was located behind the lots. Over the years, many of the lots have been combined and the alley has been vacated in most areas and incorporated into the commercial frontage. However, the depth of commercial development remains narrow on several sites.

A previous amendment to the Master Plan for Land Use, which was adopted in 1997, recommended an expansion of the commercial development area along the portion of Ann Arbor Road between Sheldon Road and Main Street. The objective was to provide adequate space for marketable buildings, landscaping, off-street parking and maneuvering, and to facilitate buffering between the commercial uses and the single-family residential neighborhood to the south. The previous amendment identified two potential strategies for expanding the commercial development area. One strategy was to extend commercial development into the single-family residential area to the south. The other strategy was to close the portion of each of the local streets that intersects with Ann Arbor Road between Sheldon Road and Main Street. The vacated road right-of-way could then be used to expand the commercial development area.

Closure of the Intersecting Local Streets

The Township has determined that the aforementioned street closures would accomplish the goal of providing additional land area to stimulate redevelopment and would not require penetration into the single-family residential area to the south. This strategy would also have the added benefit of reducing cut-through traffic within the residential neighborhood. Therefore, extending the commercial development into the single-family residential area to the south is no longer a recommendation of the Master Plan for Land Use. However, reducing the impact of commercial development upon the adjacent single-family residential area continues to be an important goal of the Master Plan for Land Use.

As of 2014, three of the seven local streets intersecting with Ann Arbor Road between Sheldon Road and Main Street have been closed to traffic from Ann Arbor Road. A photograph of the closure of Oakview Avenue is provided in Figure 25 (see Figure 25: Closure of Oakview Avenue).

Figure 25: Closure of Oakview Avenue



Source: Plymouth Township GIS

The Township should continue to work with property owners and Wayne County to close the remaining four intersecting local streets. The Township should also continue to recognize the potential adverse impact of leaving one or two of the local streets open. This scenario could cause traffic to concentrate on a few streets within the neighborhood, which could be detrimental to the homeowners located on those particular streets.

It is recommended that the local street closures occur at the initiative of the private sector, as sites are proposed for redevelopment. The cost of land acquisition, demolition, utility relocation and modification, installation of the required landscape buffer and brick screen wall, construction of the required "T-turnaround," and other costs associated with the street closure would be the responsibility of the benefiting commercial property owners. The entire right-of-way width must be included within the local street closure. No partial or half-street closures are permitted. All "T-turnaround" driveways must be constructed entirely within the commercial area and must be designed and constructed in accordance with Wayne County standards. The turn radii and other design aspects will be reviewed by the Township to ensure compliance with public safety requirements.

Impact on the Single-Family Residential Area

It is critical that infill and redevelopment sites are designed to reduce the impact of commercial development upon the single-family residential neighborhood to the south. The Township should continue to require the combination of a 6-foot brick screen wall and landscape buffer area between the commercial and single-family residential uses. In addition, the site layout should be configured to prevent dumpsters, loading areas, parking, lighting, and other functions from having an adverse impact on the adjacent single-family residential. Building facades must incorporate quality materials and be designed to complement the surrounding area. Ultimately, these policies will improve the compatibility between the Ann Arbor Road Corridor Sub-Area and the adjacent single-family residential, and will help to ensure that the Corridor remains a desirable location for business.

Key Concepts from the Ann Arbor Road Corridor Sub-Area Study

- ❖ The requirements of the ARC District for landscape, signage, and the appearance of buildings help to improve the visual continuity of the area and foster a sense of place.
- ❖ The closure of the intersecting local streets along Ann Arbor Road between Sheldon Road and Main Street provides an opportunity to expand the commercial development area and reduce cut-through traffic within the residential neighborhood.
- ❖ It is essential that infill and redevelopment sites within the commercial development area are designed to be compatible with the adjacent residential area and provide adequate buffering.

Goals & Strategies

The detailed analysis of the existing conditions of the Township, as provided in the previous sections of this document, has been used by the Planning Commission to establish a series of general development goals and strategies. The following items are intended to provide a framework to guide the physical development of the community, and assist Township leaders in land use and community development decisions.

GOAL A: Guide the development of Plymouth Township in a manner which will create, preserve, and enhance the positive living environment of the community.

STRATEGIES:

- 1) Encourage a variety of housing types and residential living environments to accommodate a range of ages and incomes.
- 2) Recognize that Plymouth Township's population is maturing and encourage senior housing developments and low-rise single-family residential developments to attract "empty nesters."
- 3) Continue to use the multiple-family and office land uses as a transition between existing or proposed single-family residential developments and more intense land uses.
- 4) Require substantial buffer plantings between new residential developments and primary roads.
- 5) Require substantial buffer plantings between single-family residential uses and non-residential uses.
- 6) Require lots in new single-family residential developments, with frontage along a major thoroughfare or collector road, to be arranged so that the back or side of the home will face the major thoroughfare or collector road. There shall be no direct vehicular access from the lots to the major thoroughfare or collector road.

- 7) Discourage lot splits which would result in the development of properties along a roadway with substantial amounts of undeveloped land in the rear, unless an orderly, low-density residential project could be developed consistent with all other standards and ordinances of the community.
- 8) Encourage interconnections between neighborhoods to reduce vehicle trips on main roads, provided that the interconnections will not invite cut-through traffic, and encourage the use of cul-de-sac streets in new single-family residential developments.
- 9) Encourage street layouts that will not result in odd shaped or leftover areas that serve no particular purpose, or are unsuited for future residential development.
- 10) Require sidewalks to be installed along the local streets within new single-family residential developments.
- 11) Require new residential developments to be fully improved with paved streets, provisions for all utilities, and street trees.
- 12) Ensure that non-residential buildings and infill development located near single-family residential developments are designed to have a residential character.
- 13) Place substantial emphasis on preserving natural features within residential developments and creating private park and open space areas, which respond to the natural features of the site or establish a framework to create a future natural area.
- 14) Establish land use policies and ordinance requirements which encourage the enhancement, preservation, and rehabilitation of existing low and moderate income housing units in the Township.

GOAL B: *Provide for a balance of residential and non-residential uses, which will serve the needs of the community without having an adverse impact on the living environment.*

STRATEGIES:

- 1) Discourage “spot zoning” of office, commercial, and industrial land uses.
- 2) Encourage the development of light industrial, high-technology, and research and development uses, which will strengthen the tax base and provide jobs for Township residents.
- 3) Recognize that a long-standing goal of the Master Plan for Land Use has been to avoid locating commercial uses at every intersection of major roads. Any new commercial development should not be located in an area which could negatively impact residential developments and, in particular, should not alter the residential character of the portion of the Township, located west of Sheldon Road between M-14 and Joy Road.
- 4) Recognize that unchecked “strip commercial” development, which generally occurs in an unplanned fashion and stretches out in a narrow thin configuration along a major thoroughfare, is not in the best interest of the public health, safety, and welfare because this type of development may result in the following:
 - a) Numerous curb cuts along the thoroughfare resulting in conflicting turning movements and increasing the potential for traffic accidents.
 - b) Unsightly conditions due to the amount of continuous hard surface parking areas and signs.
 - c) Potential impairment of land values for existing and future residential areas due to the hours of operation, traffic, noise, headlight glare, and on-site lighting glare.
- 5) Although it is not located within the jurisdictional boundaries of Plymouth Township, the Township should continue to recognize the opportunities provided by the downtown area in the City of Plymouth and consider this aspect when making land use decisions.
- 6) Monitor the need for community facilities and acquire properties as needed.
- 7) Request that the School Board work with the Township when acquiring and developing school sites, or when decommissioning school sites.

- 8) Require the construction of a new charter school to be subject to a Planning Commission review, as part of the local permit process.
- 9) Restrict multiple-family residential districts to locations which have direct access to major thoroughfares.
- 10) Provide opportunities for a variety of recreation activities, both active and passive, throughout the Township and ensure the preservation of existing public and private parks.

GOAL C: Promote the existing positive image of the community and guide development in a manner which encourages a sense of order, identity, and open space continuity.

STRATEGIES:

- 1) Maintain a safe environment for residents, business owners, and the general public through high-quality fire and police protection services.
- 2) Require that Township-owned facilities exemplify the design standards that are required of the private sector and are well-maintained.
- 3) Require the use of sound site planning principles, landscape techniques, and coordinated sign systems for new or modified office, commercial, or industrial developments.
- 4) Recognize businesses which contribute to the positive image of the Township by improving existing facilities or developing new facilities.
- 5) Require all sides of a building, including the back of a building, to be of a high-quality design.
- 6) Encourage building designs which incorporate accent materials and architectural features to break up roof lines.
- 7) When an addition to an existing building is being proposed, ensure that the design and appearance of the addition will complement the existing portion of the building.
- 8) Ensure that the design and appearance of infill buildings will be an enhancement to the surrounding area, and that the exterior finish materials will complement and/or enhance the existing buildings in the surrounding area.

- 9) Encourage developments that incorporate out-lot buildings to have common design elements throughout the subject area.
- 10) Encourage the proper maintenance and/or preservation of proposed landscape and open space areas.
- 11) Recognize the importance of the major and minor entry points to the community and ensure that these areas receive special attention during the Site Plan Review process.
- 12) Recognize the importance of shared boundaries with adjacent communities and encourage development that will not create land use conflicts.
- 13) Ensure that loading/unloading and trash collection areas are adequately screened from the view of the public.
- 14) Recognize the importance of the Ann Arbor Road Corridor, which extends from Eckles to just west of Sheldon Road (Marguerite Drive), as a key commercial area in Plymouth Township and ensure that the streetscape improvements, including the ornamental fence, stamped concrete verge, and landscape plantings, etc. are required during the Site Plan Review process.
- 15) Reduce confusion and visual clutter along all roadways by ensuring that proposed signage is an appropriate scale for the size of the property. Continue enforcing the sign regulations of the Zoning Ordinance, which contain specific requirements for the size, setback, and height of signs.
- 16) Prohibit land development which requires excessive grading and tree removal and does not provide adequate remediation.
- 17) Recognize that the existing wooded areas of the Township are limited in number and area. Further recognize that these areas are significant to the image of the Township and should be incorporated into future developments.
- 18) Recognize that existing streams, ponds, swales, wetlands, and open drainage areas form an important network which contributes to the positive image of the Township and provides for an economical means of carrying stormwater runoff.

GOAL D: *Strive for a circulation system which will facilitate the smooth, safe, and efficient flow of vehicles, bicycles, and pedestrians.*

STRATEGIES:

- 1) Maintain and improve communication with Wayne County and the MDOT regarding any traffic or circulation problems observed by the Township.
- 2) Coordinate with Wayne County and the MDOT to accommodate pedestrian and bicycle travel as part of roadway improvement projects.
- 3) Coordinate the development of major entry points to the community with Wayne County and the MDOT.
- 4) Require street setbacks, which allow adequate room for improvements and the expansion of the present road system to meet the future needs of the Township.
- 5) Require street layouts and street standards in industrial areas which are appropriate for the heavier traffic load associated with these areas, and facilitate peak-hour smooth traffic flows with minimum disruption to the general flow of the community.
- 6) Reduce the potential for vehicular conflicts by keeping the number of curb cuts along major thoroughfares and collector roads to a minimum and encourage the use of shared access points.
- 7) Encourage and facilitate the use of the Special Assessment District (SAD) process to ensure that local streets within residential developments are repaired when poor conditions exist.
- 8) Use all means possible to limit the extent of heavy truck traffic through the majority of the Township.

GOAL E: *Promote active living and healthy lifestyles in Plymouth Township.*

STRATEGIES:

- 1) Maintain a Recreation Plan for the Township and conduct periodic reviews of the plan to ensure that the existing and future recreation needs of the community are met.
- 2) Work toward the development of a pedestrian and/or bicycle pathway system throughout the Township.
- 3) Pursue grants to construct pathways in developed areas of the Township.
- 4) Coordinate with the school district to upgrade the recreational potential and environmental qualities of the existing elementary and middle school sites.
- 5) Encourage the development of recreation facilities by the private sector or nonprofit organizations and clubs, provided that the proposed location of such facilities is compatible with the existing and future land uses of the area.
- 6) Recognize the significance of the Middle Rouge Parkway to recreation planning in the Township and coordinate with Wayne County regarding new facilities for the Plymouth Township segment of the parkway.

GOAL F: *Provide for a system of checks and balances to ensure that the goals of the Township are carried through all phases of development.*

STRATEGIES:

- 1) Periodically review the Township Zoning Ordinance and make any necessary revisions to bring it into conformity with the goals and strategies of the Master Plan for Land Use.
- 2) Recognize that changing technologies may have an impact on the physical development of the Township. Monitor new technologies to determine if and when changes should be made to the ordinances.
- 3) Continue to require site plan approval for all uses, except conventional single-family uses.

- 4) Ensure that all provisions of the Township Zoning Ordinance and Subdivision Rules and Regulations reflect community policies and that these provisions are enforced.
- 5) Ensure that all government units, including the Township Board of Trustees, Planning Commission, Zoning Board of Appeals, Building Department, and Community Development Department are aware of the goals and objectives of the Township and are working toward the same goals.
- 6) Provide for the continuance of nonconforming uses until they are removed, but do not encourage their continuation.
- 7) Recognize that enforcement is vital to any ordinance and review all means and alternatives at the Township's disposal to ensure that ordinance enforcement is carried out.
- 8) Recognize the significance of land splits in the planning process and continue to require land splits to be reviewed by the Township Supervisor.
- 9) Ensure that all phases of development for a subdivision plat or condominium are addressed during the plat or Site Plan Review process.
- 10) Periodically develop and incorporate ordinance changes which will allow greater flexibility in achieving the goals of the Township.

The aforementioned Goals and Strategies of the Master Plan for Land Use are a technique through which Plymouth Township may direct the future development of the community. Another technique is the Future Land Use Map, which depicts the type of land uses that may be developed or redeveloped in a given area.

Future Land Use Map

The Future Land Use Map is a visual display of the expected future development pattern of Plymouth Township, and is an integral component of the Master Plan for Land Use. This Map provides recommendations for the continued use, new development, and redevelopment of land in the Township over the next 20 years. The Future Land Use Map is intended to be a flexible policy guide and should be consulted when modifications are being proposed to the Township Zoning Ordinance, or the zoning designation of a given site. A key distinction between the Future Land Use Map and the official Zoning Map is that the Future Land Use Map defines the land use of broad, generalized areas. Unlike the official Zoning Map, the Future Land Use Map does not deal with the individualized use of each site. Therefore, deviations from the Future Land Use Map may be appropriate, provided that the deviation is consistent with the spirit and intent of the Master Plan for Land Use. The Future Land Use Map divides the Township into various land use designations, which are summarized below.

Summary of the Future Land Use Designations

TYPE OF USE	FUTURE LAND USE DESIGNATION
Single-Family Residential	<p><i>Intended for one single-family dwelling. May also include support uses (churches, private schools, daycare, etc.)</i></p> <ul style="list-style-type: none"> • Residential Low Density • Residential Low Intermediate Density • Residential Medium Density
Multiple-Family Residential	<p><i>Intended for apartment, townhouse, attached condos, etc.</i></p> <ul style="list-style-type: none"> • Residential Intermediate Density • Residential High Density • Senior High-Rise
Mobile Home	<p><i>Intended for manufactured single-family homes within a mobile home park</i></p> <ul style="list-style-type: none"> • Residential Manufactured Homes
Office	<p><i>Intended for medical offices, or financial, professional, administrative, or executive offices, etc.</i></p> <ul style="list-style-type: none"> • Office • Ann Arbor Road Corridor Office

TYPE OF USE	FUTURE LAND USE DESIGNATION
Commercial	<p><i>Intended for convenience or comparative retail, personal service, restaurants, or automotive commercial, etc.</i></p> <ul style="list-style-type: none"> • Commercial • Ann Arbor Road Corridor Commercial
Technology & Research	<p><i>Intended for high-technology, research, and prototype development</i></p> <ul style="list-style-type: none"> • Technology/Research & Development
Industrial	<p><i>Intended for manufacturing, assembling, warehousing, distributing, packaging, or testing of products, etc.</i></p> <ul style="list-style-type: none"> • Light Industrial • Industrial
Public/Institutional	<p><i>Intended for Township administrative offices and buildings, fire stations, or the utility uses located south of Powell Road and east of Napier Road</i></p> <ul style="list-style-type: none"> • Public/Quasi-Public
Recreation/Open Space	<p><i>Intended for public or private parks, recreation, or open space areas</i></p> <ul style="list-style-type: none"> • Recreation Space • Private Recreation Space

A detailed description of each of the aforementioned future land use designations is provided below, which outlines the intent and general location of each designation. Also considered is the relationship between the existing zoning and future land use classifications.

Detailed Description of the Future Land Use Designations

Single-Family Residential

Intended for one single-family dwelling. May also include support uses (churches, private schools, daycare, etc.)

- Residential Low Density
- Residential Low Intermediate Density
- Residential Medium Density

In previous decades, several large single-family residential developments were established to meet the growing demand for housing. The Existing Land Use study found that many of the large-acreage parcels intended for single-family residential have already been developed. However, there is still an opportunity for future growth in the form of smaller-scale developments.

A goal of the Master Plan for Land Use is to provide for a variety of housing types and residential living environments to accommodate a range of ages and incomes. The Future Land Use Map accomplishes this goal by establishing the following single-family residential future land use categories:

Residential Low Density

The Residential Low Density designation is intended for large, estate-size single-family residential development with a density of 0.8 to 1 dwelling units per acre. The largest contiguous area of land designated for Residential Low Density uses is located west of Ridge Road and south of North Territorial Road and M-14. There is also a smaller Residential Low Density area located northeast of North Territorial Road and Napier Road. The corresponding zoning district for Residential Low Density uses is the R-1-E District.

Residential Low Intermediate Density

The Residential Low Intermediate Density designation is intended for single-family residential development with a density of 1 to 3 dwelling units per acre. The Residential Low Intermediate Density area generally occurs south of M-14 between Sheldon Road and Ridge Road. In addition, the Future Land Use Map identifies smaller areas of Residential Low Intermediate Density uses north of North Territorial Road between Napier Road and Ridge Road, southeast of North Territorial Road and Napier Road, and southeast of M-14 and Napier Road. Residential Low Intermediate Density uses have 2 corresponding zoning districts, including the R-1-H and R-1-S districts.

Residential Medium Density

The Residential Medium Density designation is intended for single-family residential development with a density of 4 to 5 dwelling units per acre. The areas which comprise Residential Medium Density uses are primarily located in the eastern portion of the Township. However, a Residential Medium Density area is located south of North Territorial Road between Napier Road and M-14. The R-1 zoning district accommodates Residential Medium Density uses.

Multiple-Family Residential

Intended for apartment, townhouse, attached condos, etc.

- Residential Intermediate Density
- Residential High Density
- Senior High-Rise

The Existing Land Use study determined that multiple-family residential development is generally located in areas to serve as a transition between single-family residential uses and more intense land uses. This development pattern has been maintained and augmented by the Future Land Use Map, which provides the following future land use groups for multiple-family residential uses:

Residential Intermediate Density

The Residential Intermediate Density designation is intended for multiple-family residential development with a density of 6 to 8 dwelling units per acre, a convalescent home, or senior housing community. This designation applies to a currently undeveloped parcel of land, which contains approximately 29 acres, located northeast of Ann Arbor Road and the CSX Railroad. The property is zoned IND. However, this area has been identified by the Township as a suitable location for multiple-family residential because it is directly adjacent to an established single-family residential subdivision. A senior housing community is strongly recommended. A Planned Unit Development Option, which would permit a senior housing community, was approved for this site in 2014.

Residential High Density

The Residential High Density designation is intended for multiple-family residential uses with a density of 6 to 10 dwelling units per acre. The Residential High Density areas are dispersed throughout the Township and occur in locations which serve as a buffer between single-family residential uses and more intense commercial and industrial uses. The corresponding zoning district for Residential High Density uses is the R-2-A District.

Senior High-Rise

The Senior High-Rise designation is intended for senior-housing structures with a height in excess of 2.5 stories. The Future Land Use Map shows Senior High-Rise uses within an area located southwest of M-14 and Northville Road. The Mid-Rise zoning district accommodates senior high-rise uses.

Mobile Home

Intended for manufactured single-family homes within a mobile home park

- Residential Manufactured Homes

The Residential Manufactured Homes future land use designation accommodates mobile home development. Residential Manufactured Homes occur in the northwest portion of the Township, as illustrated on the Future Land Use Map. The boundary of this area follows the same boundary as the RM zoning district.

Office

Intended for medical offices, or financial, professional, administrative, or executive offices, etc.

- Office
- Ann Arbor Road Corridor Office

The Future Land Use Map often employs the office future land use groups to create a transition between single-family residential and more intense land uses. Office future land uses are categorized as either Office or Ann Arbor Road Corridor Office. The key distinction is that the Ann Arbor Road Corridor Office designation exclusively pertains to office uses located within the Ann Arbor Road Corridor area. Outside of the Ann Arbor Road Corridor, areas labeled as Office on the Future Land Use Map are scattered throughout the eastern portion of the Township. The office future land use classifications are represented by the OS, OS-ARC, OR, and Mid-Rise zoning districts.

Commercial

Intended for convenience or comparative retail, personal service, restaurants, or automotive commercial, etc.

- Commercial
- Ann Arbor Road Corridor Commercial

Commercial uses are represented by the Commercial and Ann Arbor Road Corridor Commercial future land use categories. The Ann Arbor Road Corridor Commercial designation applies to commercial uses located exclusively within the Ann Arbor Road Corridor area. On the Future Land Use Map, the areas intended for Commercial uses are dispersed throughout the eastern portion of the Township, and are also located at the intersection of Five Mile Road and Sheldon Road, and at the intersection of Five Mile Road and Beck Road. The C-1, C-2, and ARC zoning districts accommodate the Commercial future land use areas.

Technology & Research

Intended for high-technology, research, and prototype development

- Technology/Research & Development

Technology & Research uses are represented by the Technology/Research & Development future land use classification. The largest contiguous area occurs north of M-14 between Ridge Road and Sheldon Road. Other areas intended for Technology/Research & Development are located southeast of Five Mile Road and Sheldon Road, and southeast of Schoolcraft Road and Haggerty Road. The TAR District is the corresponding zoning district.

Industrial

Intended for manufacturing, assembling, warehousing, distributing, packaging, or testing of products, etc.

- Light Industrial
- Industrial

A goal of the Master Plan for Land Use is to encourage the development of light industrial, high-technology, and research and development uses, which will strengthen the tax base and provide jobs. This goal is supported by the Future Land Use Map, which designates a significant portion of land in the Township for Industrial future land uses. These uses are represented by the following future land use categories:

Light Industrial

The Light Industrial designation is intended for light manufacturing, assembling, warehousing, distributing, packaging, or testing operations. The largest contiguous area of land intended for Light Industrial uses is located south of Five Mile Road between Napier Road and Sheldon Road. Other smaller areas occur southeast of M-14 and Sheldon Road, southwest of Five Mile Road and Northville Road, and southwest of Schoolcraft Road and Haggerty Road. The corresponding zoning district is the IND District.

Industrial

The Industrial designation is intended for large-scale manufacturing, assembling, warehousing, distributing, packaging, or testing operations. Industrial future land uses are generally located northwest of M-14 and Sheldon Road, northeast of Plymouth Road and Haggerty Road, and northwest of Joy Road and Haggerty Road. Smaller Industrial future land use areas occur northwest of Plymouth Road and Haggerty Road, and north of Ann Arbor Road and east of Lilley Road/Mill Street. The IND District accommodates Industrial future land uses.

Public/Institutional

Intended for Township administrative offices and buildings, fire stations, or the utility uses located south of Powell Road and east of Napier Road

- Public/Quasi-Public

Public/Institutional uses are represented by the Public/Quasi-Public future land use group. These uses are dispersed throughout the Township and specifically pertain to Township administrative offices and buildings, fire stations, and the utility uses located south of Powell Road and east of Napier Road. The PL District is the main corresponding zoning district for Township buildings. However, the Department of Public Works building on Port Street is located on property that is zoned IND, and the aforementioned utility uses are located on property that is zoned R-1-E.

Recreation/Open Space

Intended for public or private parks, recreation, or open space areas

- Recreation Space
- Private Recreation Space

The Master Plan for Land Use recognizes the importance of providing recreation/open space areas throughout the community. These uses are separated into the following future land use designations:

Recreation Space

The Recreation Space designation is intended for Township-owned parks, the Middle Rouge Parkway, or developed or undeveloped public school sites. These uses are scattered throughout the Township. The PL District is the corresponding zoning district for Recreation Space future land uses.

Private Recreation Space

The Private Recreation Space designation is intended for private recreation/open space within a platted subdivision. These future land uses primarily occur within the Single-Family Residential zoning districts, but are also found within the TAR and IND Districts.

Proposed Modifications to the Future Land Use Map

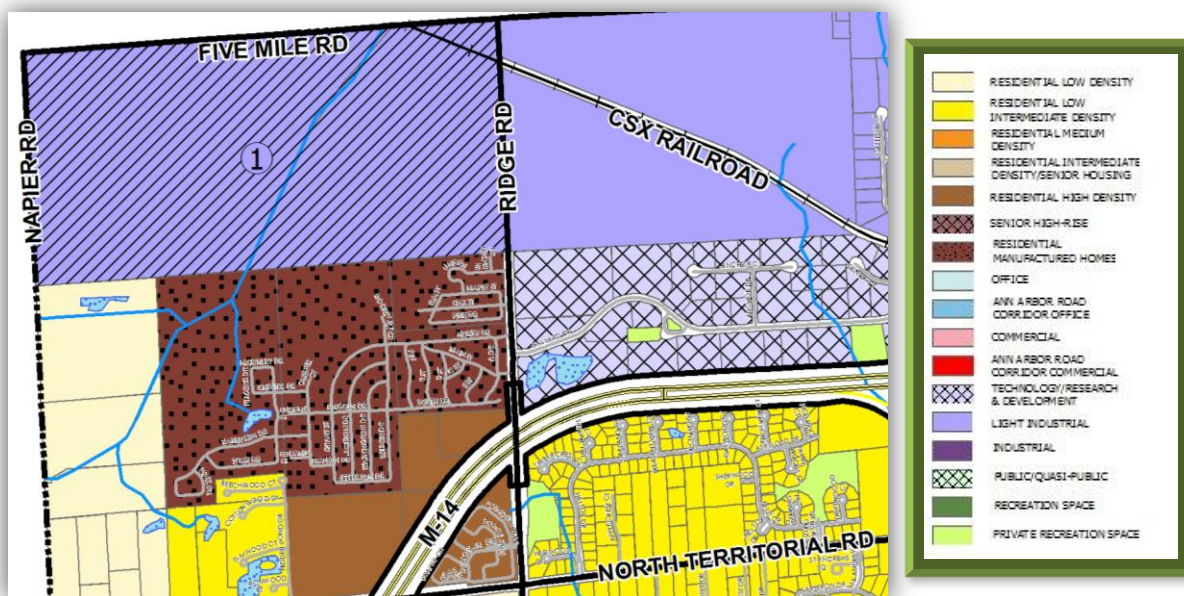
As indicated in the Community Profile study, the Township may expect a relatively modest increase of approximately 2.4% in the population count between 2010 and 2040, as projected by the SEMCOG 2040 Regional Forecast Report. Therefore, it would seem that the quantity of land on the Future Land Use Map intended for residential uses, and supporting office and commercial uses, is appropriate at this time. In addition, through the Existing Land Use study, it became clear that the Township already has an established development pattern and should focus its efforts to ensure that redevelopment projects will complement and enhance existing conditions.

On that basis, no sweeping changes to the Future Land Use Map are being proposed. However, the Planning Commission has adjusted the future land use designation of certain areas to reflect existing conditions or changed circumstances, and has also made specific recommendations for the development or redevelopment of select locations. The proposed modifications are described and depicted below.

Site 1: Add a Note to the Future Land Use Map

The Township has identified the undeveloped property located south of Five Mile Road between Napier Road and Ridge Road, as shown with a diagonal line pattern in Figure 26, as a suitable location for a high-technology park. The Johnson Creek and a stand of mature trees run through the approximate center of the site. An effort should be made to preserve and incorporate these natural features into the development of the site. Therefore, development under a Planned Unit Development (PUD) Option is strongly recommended. Under a PUD, the property could potentially be developed for a high-technology park with a mixture of other support uses, such as upscale retail and restaurants, live/work units, or recreation facilities. Although the Township has not had any detailed plans prepared for this site, the Future Land Use Map should be modified to include the following note for this site, "Planned Unit Development with high-technology and potential mixed uses recommended."

Figure 26: Proposed Modification to Site 1



Source: Plymouth Township GIS

Site 2: Change from Public/Quasi-Public to Light Industrial

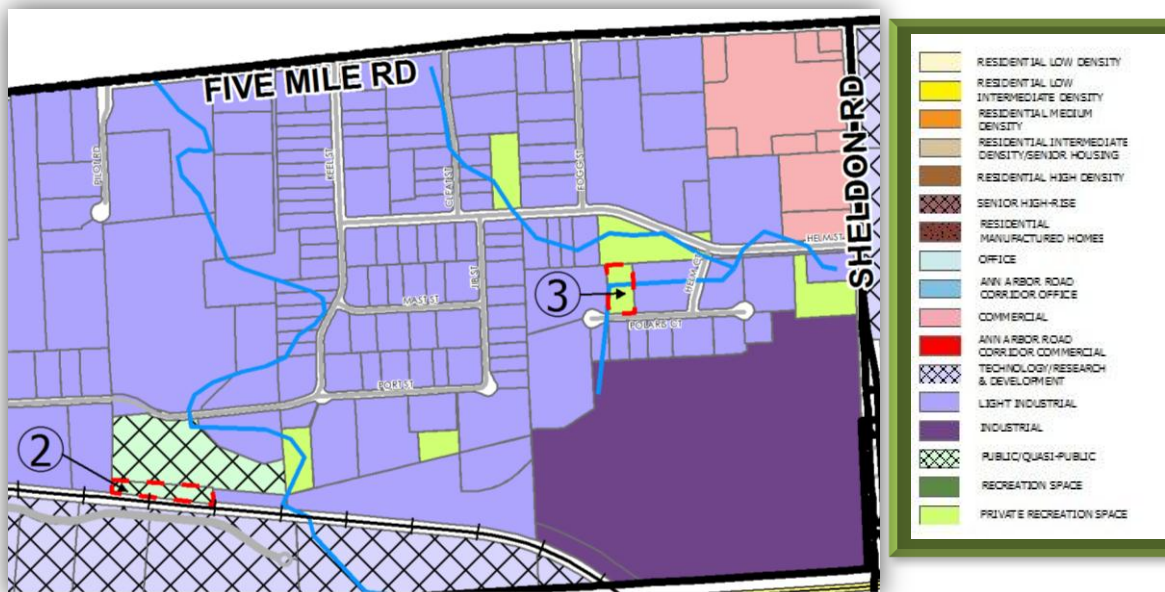
The CSX Railroad owns property to the south of the Township Department of Public Works building on Port Street, as illustrated in Figure 27.1 and 27.2 and labeled as site “2”. This area is zoned IND and is classified on the existing Future Land Use Map for Public/Quasi-Public land uses. However, other railroad properties have been designated as either Light Industrial or Industrial future land uses on the existing Future Land Use Map. Therefore, the Future Land Use Map should be modified to show Light Industrial for this area.

Site 3: Change from Private Recreation Space to Light Industrial

The area labeled as site “3” in Figure 27.1 and 27.2 is zoned IND and is designated for Private Recreation Space on the existing Future Land Use Map. However, the site was not platted as a park or open space area, and has been developed as a parking lot for an industrial business. The Future Land Use Map should be modified to reflect Light Industrial for this area.

Figure 27.1: Proposed Modification to Sites 2 & 3

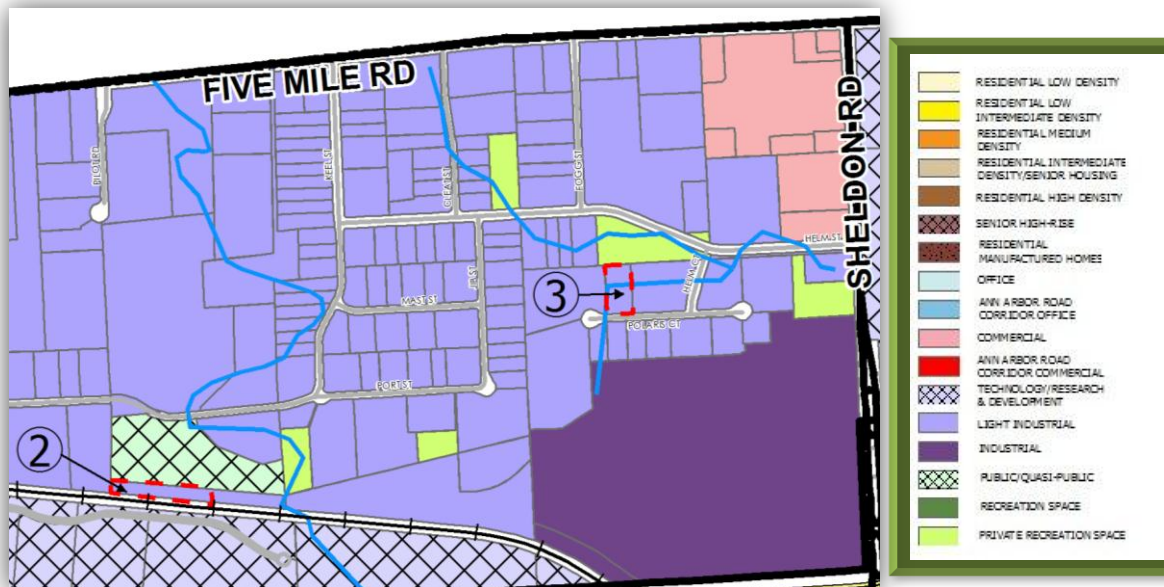
EXISTING FUTURE LAND USE MAP



Source: Plymouth Township GIS

Figure 27.2: Proposed Modification to Sites 2 & 3

PROPOSED FUTURE LAND USE MAP



Source: Plymouth Township GIS

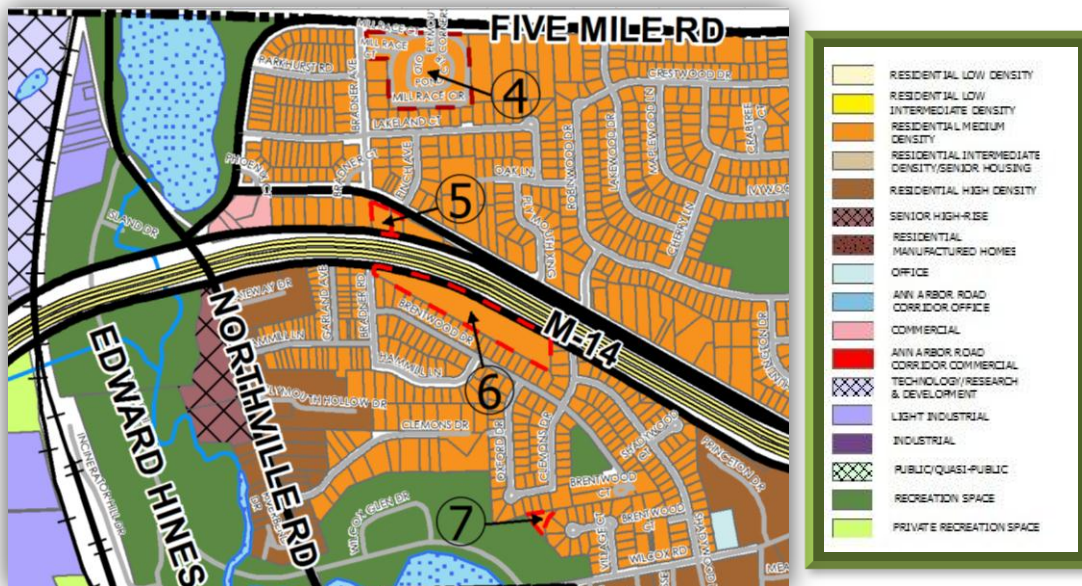
Site 4: Change from Residential Medium Density to Residential High Density

The area labeled as site “4” in Figure 28.1 and 28.2 is zoned R-2-A and was developed for multiple-family purposes several years ago. The existing Future Land Use Map classifies this area for Residential Medium Density uses, and should be modified to indicate Residential High Density uses.

Site 5: Change from Residential Medium Density to Public/Quasi-Public

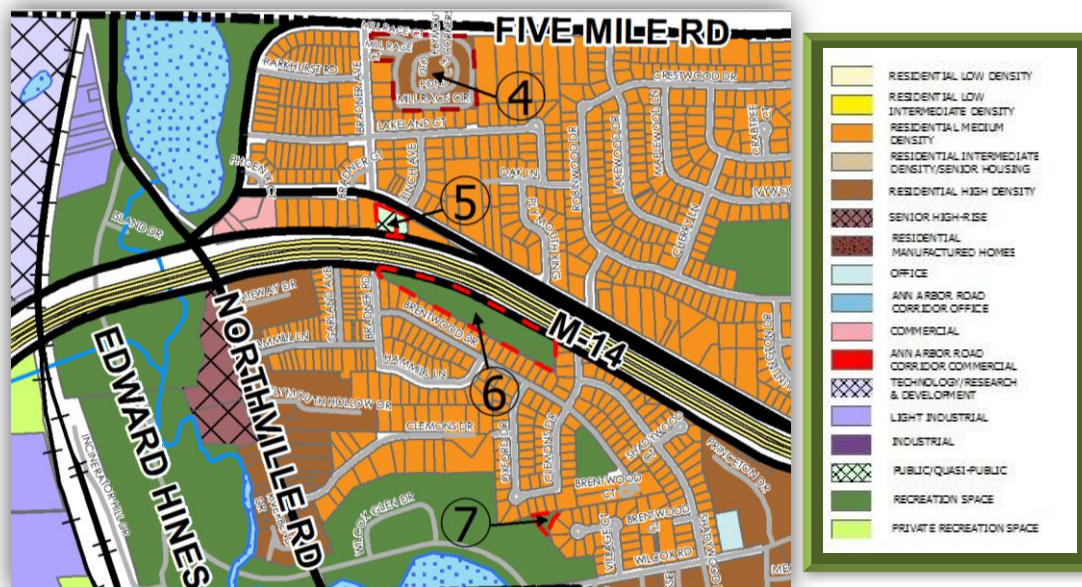
The Township owns property along Schoolcraft Road, which is identified as site “5” in Figure 28.1 and 28.2. The site is zoned PL and has been developed as the Friendship Station senior center. The existing Future Land Use Map identifies this area for Residential Medium Density uses, and should be modified to reflect Public/Quasi-Public.

Figure 28.1: Proposed Modification to Sites 4, 5, 6, & 7
EXISTING FUTURE LAND USE MAP



Source: Plymouth Township GIS

Figure 28.2: Proposed Modification to Sites 4, 5, 6, & 7
PROPOSED FUTURE LAND USE MAP



Source: Plymouth Township GIS

Site 6: Change from Residential Medium Density to Recreation Space

The area labeled as site “6” in Figure 28.1 and 28.2, on the previous page, is owned by the Township. The property is zoned PL and is maintained as open space. The existing Future Land Use Map identifies this area for Residential Medium Density uses, and should be modified to show Recreation Space.

Site 7: Change from Residential Medium Density to Recreation Space

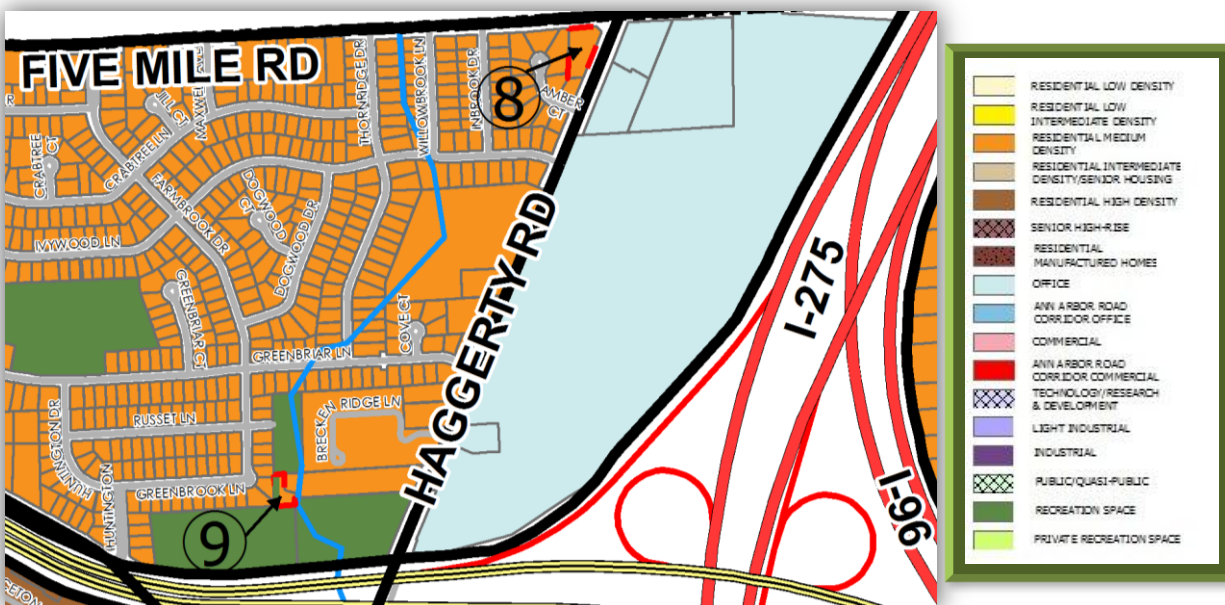
The area identified as site “7” in Figure 28.1 and 28.2, on the previous page, is part of the Wayne County Park system, but is designated for Residential Medium Density uses on the existing Future Land Use Map. The Future Land Use Map should be modified to identify this area for Recreation Space.

Site 8: Change from Residential Medium Density to Office

The area labeled as site “8” in Figure 29.1 and 29.2 is zoned OS and contains a childcare center. The Future Land Use Map currently identifies this area for Residential Medium Density uses, and should be modified to reflect Office uses.

Figure 29.1: Proposed Modification to Sites 8 & 9

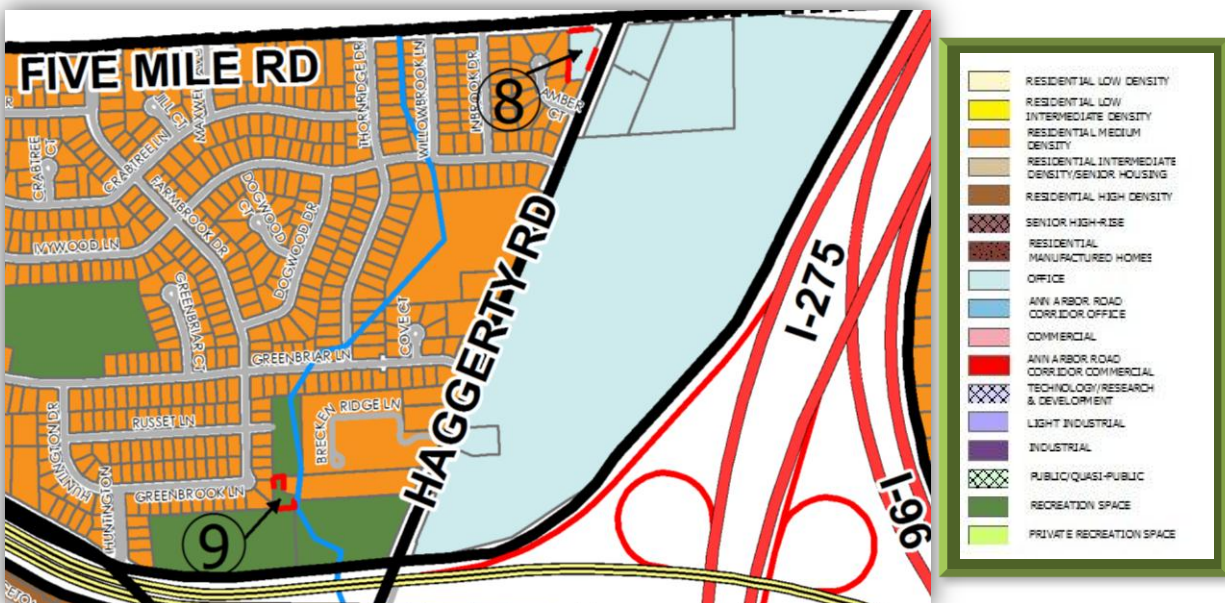
EXISTING FUTURE LAND USE MAP



Source: Plymouth Township GIS

Figure 29.2: Proposed Modification to Sites 8 & 9

PROPOSED FUTURE LAND USE MAP



Source: Plymouth Township GIS

Site 9: Change from Residential Medium Density to Recreation Space

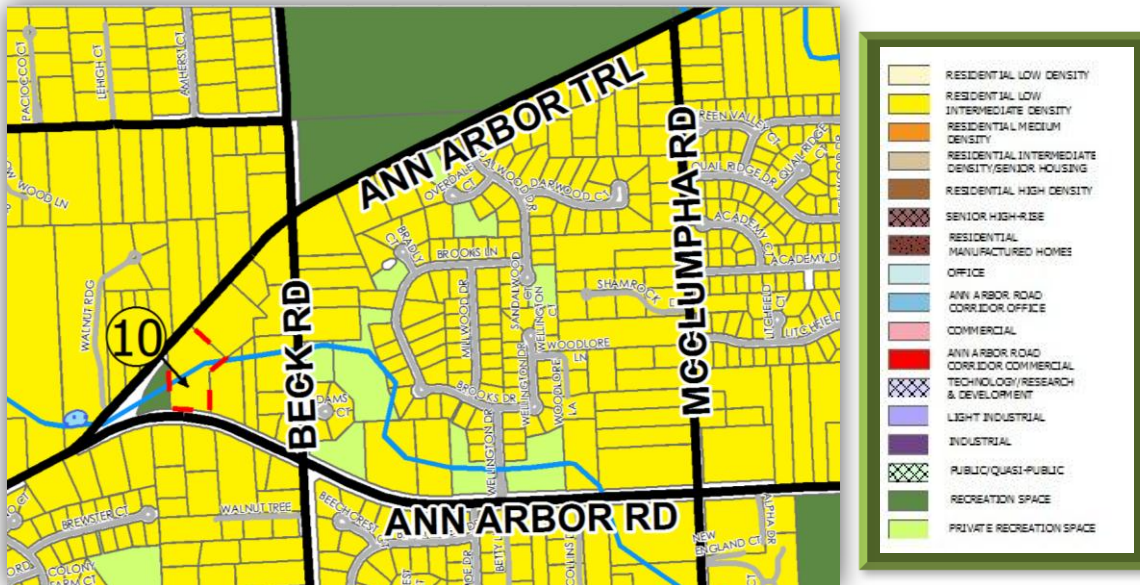
The Township maintains an open space area, which connects to the Lake Pointe Soccer Park, as depicted in Figure 29.1 and 29.2 as site "9". The existing Future Land Use Map shows a portion of the connection point area as Residential Medium Density and a portion as Recreation Space. The Future Land Use Map should be modified to designate the entire connection point area as Recreation Space.

Site 10: Change from Residential Low Intermediate Density to Recreation Space

The area labeled as site "10" in Figure 30.1 and 30.2, on the following page, is an open space area, which is owned by the Township and is zoned PL. The existing Future Land Use Map designates this area for Residential Low Intermediate Density and should be modified to reflect Recreation Space.

Figure 30.1: Proposed Modification to Site 10

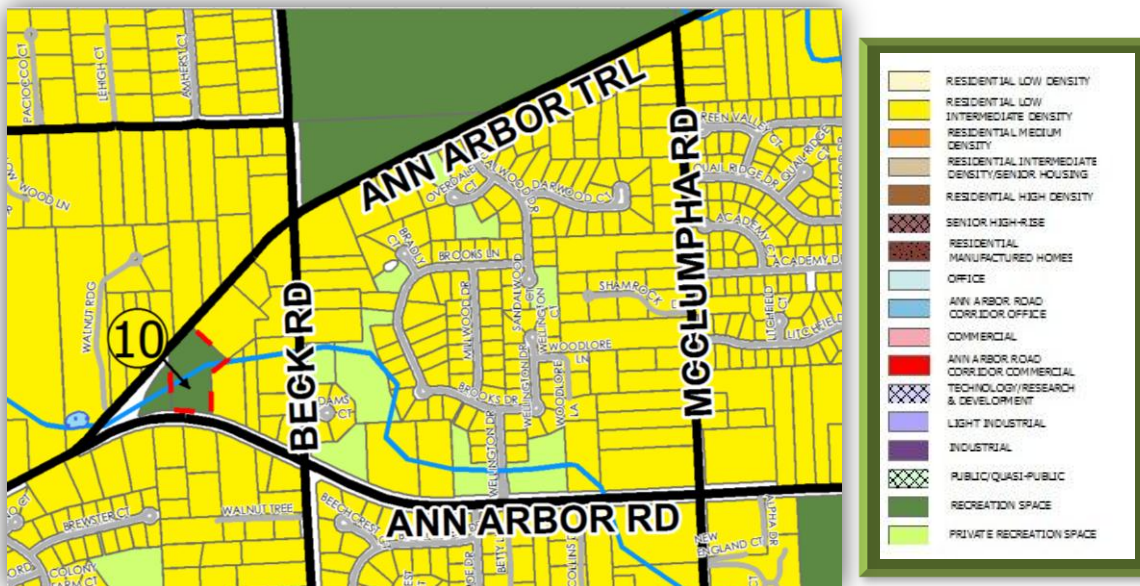
EXISTING FUTURE LAND USE MAP



Source: Plymouth Township GIS

Figure 30.2: Proposed Modification to Site 10

PROPOSED FUTURE LAND USE MAP



Source: Plymouth Township GIS

Site 11: Change from Residential Medium Density to Residential High Density

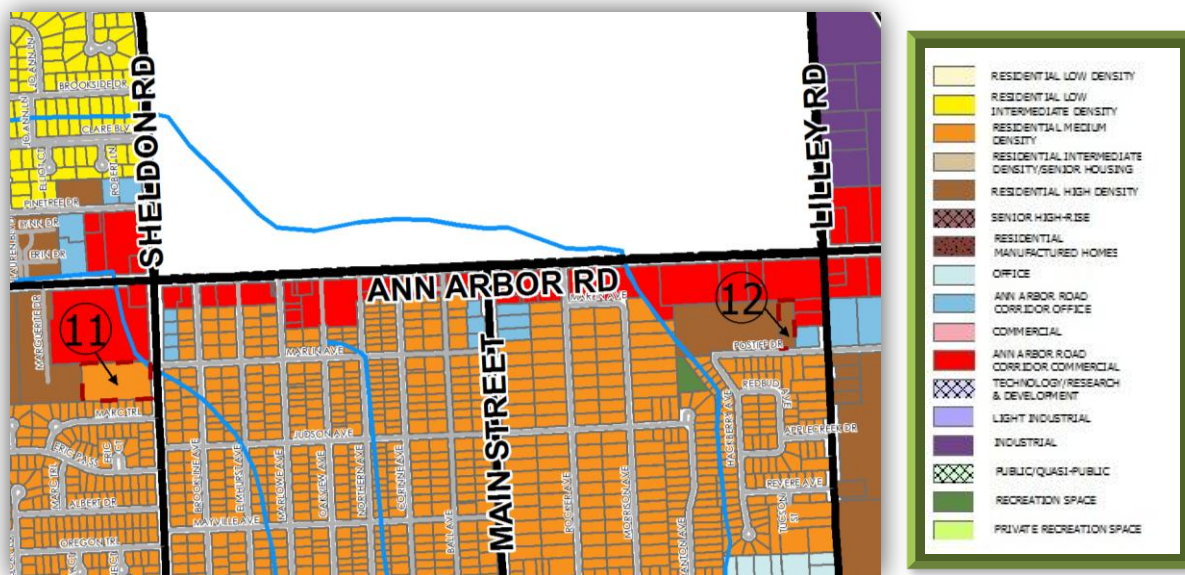
The area identified as site "11" in Figure 31.1 and 31.2 is zoned R-2-A and contains a church. The site is designated for Residential Medium Density uses on the existing Future Land Use Map and should be modified to Residential High Density uses. This modification would be consistent with the zoning of the property, and would follow the goal of establishing transitional land uses between Single-Family Residential uses and, in this case, commercial uses.

Site 12: Change from Residential High Density to Office

The area labeled as site "12" in Figure 31.1 and 31.2 was rezoned from R-2-A to OS in 2013. At this time, the Future Land Use Map designates this property for Residential High Density. The Future Land Use Map should be updated to reflect Office, based upon the current zoning.

Figure 31.1: Proposed Modification to Sites 11 & 12

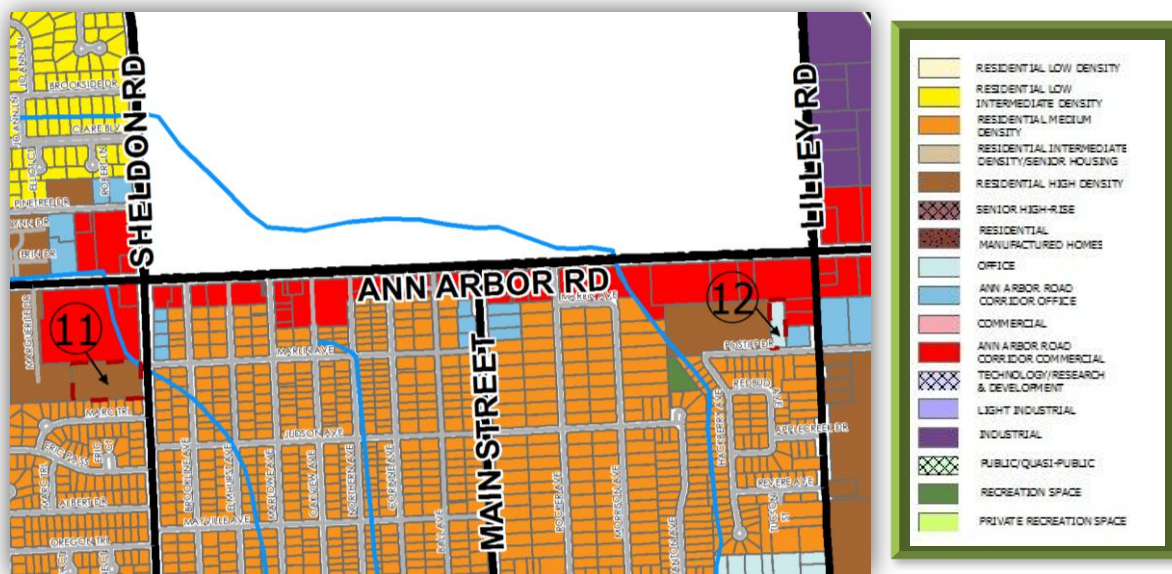
EXISTING FUTURE LAND USE MAP



Source: Plymouth Township GIS

Figure 31.2: Proposed Modification to Sites 11 & 12

PROPOSED FUTURE LAND USE MAP



Source: Plymouth Township GIS

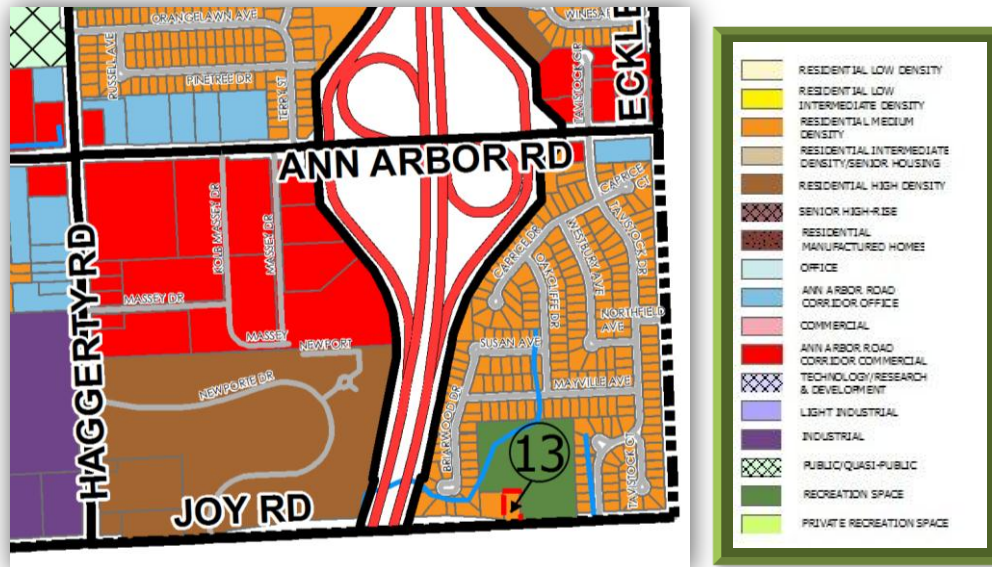
Site 13: Change from Residential Medium Density to Recreation Space

The Plymouth Community School District owns property along Joy Road, which is illustrated as site "13" in Figure 32.1 and 32.2, on the following page. This area is part of a developed school site. The existing Future Land Use Map designates this area for Residential Medium Density uses and should be modified to reflect Recreation Space.

Area-wide: Clarification to Private Recreation Space

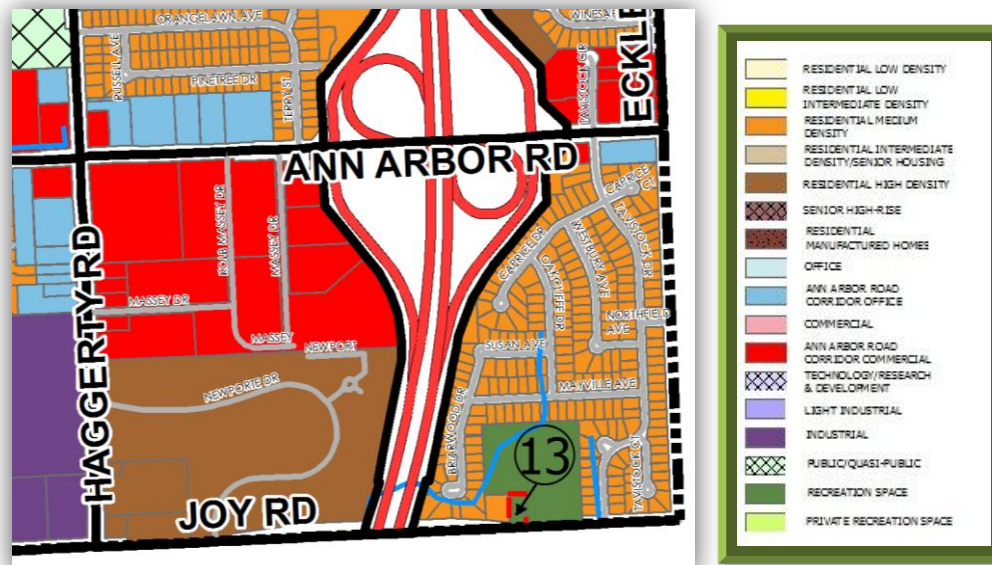
The definition of Private Recreation Space has been clarified and entails an area-wide modification to the existing Future Land Use Map. Only the areas designated for private recreation/open space within a platted subdivision will be identified for Private Recreation Space uses on the updated Future Land Use Map.

Figure 32.1: Proposed Modification to Site 13
EXISTING FUTURE LAND USE MAP



Source: Plymouth Township GIS

Figure 32.2: Proposed Modification to Site 13
PROPOSED FUTURE LAND USE MAP

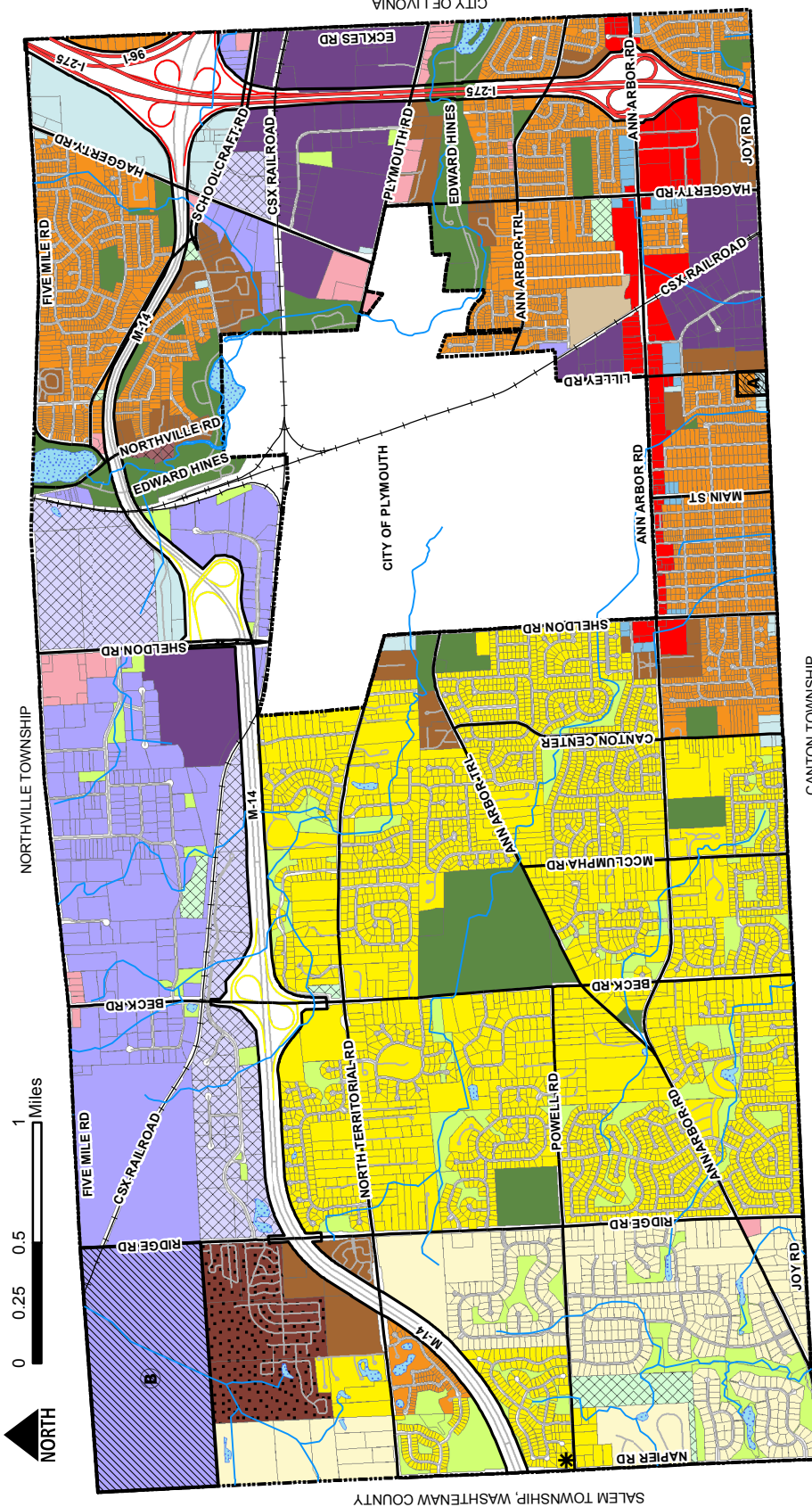


Source: Plymouth Township GIS

The Future Land Use Map, as shown on the following page, has been updated in accordance with modifications described on pages 75 through 85 of this document (see Map 12: Plymouth Township – Future Land Use).

The development pattern outlined in the Future Land Use Map is based upon the Goals and Strategies of the Master Plan for Land Use. Taken together, the written Goals and Strategies and the visual Future Land Use Map promote informed decision-making and lead to a well-balanced community. These policies will help to ensure that Plymouth Township continues to be a desirable community in which to live, work, and recreate.

Map 12: Plymouth Township - Future Land Use



FUTURE LAND USE MAP

CHARTER TOWNSHIP OF PLYMOUTH, WAYNE COUNTY, MICHIGAN

- RESIDENTIAL LOW DENSITY
- RESIDENTIAL LOW INTERMEDIATE DENSITY
- RESIDENTIAL MEDIUM DENSITY
- RESIDENTIAL INTERMEDIATE DENSITY/SENIOR HOUSING
- RESIDENTIAL HIGH DENSITY
- SENIOR HIGH-RISE

- RESIDENTIAL MANUFACTURED HOMES
- OFFICE
- ANN ARBOR ROAD CORRIDOR OFFICE
- COMMERCIAL
- ANN ARBOR ROAD CORRIDOR COMMERCIAL
- TECHNOLOGY/RESEARCH & DEVELOPMENT

- LIGHT INDUSTRIAL
- INDUSTRIAL
- PUBLIC/QUASI-PUBLIC
- RECREATION SPACE
- PRIVATE RECREATION SPACE
- EXISTING CELL TOWER

The key issues to be considered will be whether any proposed development accomplishes the following: 1) achieves stability for the area, 2) assembles the individual parcels for redevelopment, and 3) ensures compatibility in the design and function with abutting land uses.

Planned Unit Development with high-technology and potential mixed uses recommended.

We hereby certify that this Future Land Use Map, along with the accompanying text and drawings referenced in the document titled, "Charter Township of Plymouth Master Plan for Land Use," was formally adopted by the Planning Commission on April 15, 2015, and by the Board of Trustees on May 19, 2016.

Dennis Webb
Planning Commission Chairman

Harvey Koryzeman
Township Clerk

Source: Plymouth Township GIS



References

- Eye on Michigan. (2014). *Historic Locations & Attractions*. Retrieved from <http://www.eyeonmichigan.com>.
- McKenna Associates, Inc. (1994). *Charter Township of Plymouth Master Plan*.
- McKenna Associates, Inc. (1997). *Amendment to the Master Plan: Ann Arbor Road Sheldon to South Main Street Area*.
- McKenna Associates, Inc. (2004). *Master Plan Amendment*.
- McKenna Associates, Inc. & Anulewicz, James D. (2010). *Master Plan Amendment November 2009*.
- Plymouth Chamber of Commerce. (2014). *Industrial Business*. Retrieved from <http://www.plymouthmich.org>.
- Plymouth Historical Museum. (1998). *The History of Plymouth Township*. [Compilation of documents retrieved from the Archives of the Historical Museum].
- Plymouth48170. (1997-2014). *Historical Summary of Plymouth, Michigan 48170*. Retrieved from <http://www.plymouth48170.com>.
- Southeast Michigan Council of Governments. (2014). *Community Profiles*. Retrieved from <http://www.semCog.org>.
- Southeast Michigan Council of Governments. (2013). *Creating Success with our Transportation Assets: 2014-2017 Transportation Improvement Program (TIP) for Southeast Michigan*. Retrieved from <http://www.semCog.org>.
- Southeast Michigan Council of Governments. (2002). *Historical Population and Employment by Minor Civil Division, Southeast Michigan*. Retrieved from <http://library.semCog.org>.
- Southeast Michigan Council of Governments. (2014). *2040 Regional Forecast Report*. Retrieved from <http://www.semCog.com>.
- Southeast Michigan Council of Governments. (2014). *Road Network Report*. Retrieved from: <http://www.semCog.org>.

- Sternberg, Laura. (2014). *Profile of Plymouth City/Township*. Retrieved from <http://detroit.about.com>.
- United States Census Bureau. Census 2000, Summary File 1. *Table DP-1: Plymouth Charter Township, M.I.* Generated by Jana Radtke; using American FactFinder. Retrieved on September 2, 2014, from <http://factfinder2.census.gov>.
- United States Census Bureau. Census 2010, Summary File 1. *Table DP-1: Plymouth Charter Township, M.I.* Generated by Jana Radtke; using American FactFinder. Retrieved on May 15, 2014, from <http://factfinder2.census.gov>.
- United States Census Bureau. Census 2010, Summary File 1. *Table QT-H1: Plymouth Charter Township, M.I.* Generated by Jana Radtke; using American FactFinder. Retrieved on May 15, 2014, from <http://factfinder2.census.gov>.
- United States Census Bureau. Census 2010, Summary File 1. *Table QT-H2: Plymouth Charter Township, M.I.* Generated by Jana Radtke; using American FactFinder. Retrieved on May 15, 2014, from <http://factfinder2.census.gov>.
- United States Census Bureau. Census 2010, Summary File 1. *Table QT-P11: Plymouth Charter Township, M.I.* Generated by Jana Radtke; using American FactFinder. Retrieved on May 15, 2014, from <http://factfinder2.census.gov>.
- United States Census Bureau. 2008-2012 American Community Survey 5-Year Estimates. *Table S1501: Plymouth Charter Township, M.I.* Generated by Jana Radtke; using American FactFinder. Retrieved on May 15, 2014, from <http://factfinder2.census.gov>.
- United States Census Bureau. 2008-2012 American Community Survey 5-Year Estimates. *Table DP03: Plymouth Charter Township, M.I.* Generated by Jana Radtke; using American FactFinder. Retrieved on September 9, 2014, from <http://factfinder2.census.gov>.
- United States Census Bureau. 2008-2012 American Community Survey 5-Year Estimates. *Table DP04: Plymouth Charter Township, M.I.* Generated by Jana Radtke; using American FactFinder. Retrieved on May 15, 2014, from <http://factfinder2.census.gov>.
- United States Census Bureau. 2008-2012 American Community Survey 5-Year Estimates. *Table S2401: Plymouth Charter Township, M.I.* Generated by Jana Radtke; using American FactFinder. Retrieved on September 12, 2014, from <http://factfinder2.census.gov>.