



# *Z*EELAND *C*HARTER *T*OWNSHIP

## *M*ASTER *P*LAN



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Somewhat irregular in shape, Zeeland Township's south, and east borders conform to a typical Township rectangular configuration. However, the west border is interrupted by the City of Zeeland, which takes a large portion out of the westerly side of the Township.

### **Historical Perspective**

The Zeeland area was settled in 1847 by Jannes Vande Luyster, who sold all of his physical assets in the Netherlands and provided passage for those persons lacking the means to pay for travel. The Township was named after the Province of Zeeland in the Netherlands. The first group of 457 settlers was seeking religious and political freedom. Despite many hardships, the colony survived due to the strong faith and dedicated efforts of those who settled in the Zeeland area wilderness. The Ottawa Indians were also a prominent source of aid to the Zeeland immigrants. Friendly, peaceful and helpful, the Indians taught the first settlers the skills of wilderness living. The area would eventually become a thriving agricultural community that included large chicken hatcheries and significant expanses of muck soils that still produce specialty crops today.

The first business in the Zeeland area was established in Drenthe by Johannes Hoogesteger. Once a general store, the structure is now revitalized as an ice cream parlor on the southeast corner of Adams Street and 64<sup>th</sup> Avenue. Originally, local commerce supplies were brought down the Grand River from Grand Rapids by flatboat—a far cry from the interstate that whisks people and goods through the Township today.






Remnants of early settlements remain in Drenthe, Vriesland and Beaverdam. Several historic churches, homes, and peaceful cemeteries with tombstones dating back into the 1800's remind Township citizens of their predecessors. These features are also an important part of the Township's character.

### **A Snapshot of the Zeeland Township Area**

Once a strong, traditional farming community, Zeeland Township still maintains an agricultural base. However, in recent years the Township has grown in population and has evolved into a bedroom community supporting those who work in either the Grand Rapids or Holland communities but wish to live in a more rural type of setting. As of the 2000 U. S. Census, over 85% of the people of working age (over 16 years old) who live in Zeeland Township work outside of the Township.

The data shown in Chapter 2, Demographics, indicates that the population of Zeeland Township has virtually exploded in the past decade, growing by over 70% from the 1990 U.S. Census to the 2000 Census. The population appears to be spreading from the Holland urban area and from the suburbs of Grand Rapids. Many people also commute from Allegan County, through Zeeland Township, to employment centers near Holland and Zeeland. There are several reasons for this population growth, including:



-  The Township is bisected from southwest to northeast by both I-196 and Chicago Drive. Both of these routes directly link Grand Rapids with Holland.
-  Zeeland Township is nearly centrally located between the Holland and Grand Rapids metropolitan areas, offering easy and convenient access to either, via I-196 or Chicago Drive. Zeeland Township is especially attractive to couples where one person may work in Holland and the other in Grand Rapids.
-  Although the population has grown significantly, the base of the Township's land use remains agricultural, especially toward the eastern portions of the Township. This offers an attractive, rural way of life for those trying to escape the perceived hectic pace and congestion of a more suburban or urban lifestyle.
-  Zeeland Township offers easy access to the shores of Lake Michigan, including the beautiful beaches and sand dunes which attract many tourists each summer. For those working in the Grand Rapids area, but who wish to live closer to the amenities offered by the 'Big Lake', Zeeland Township is an appealing alternative.
-  The Township is close to employment centers in Holland and the City of Zeeland, which also has recently become an employment center.

One of the challenging issues facing the Township today is its ability to balance the positive aspects of land preservation with the economic benefits of development. The ability to maintain a unique yet comfortable community environment will also depend heavily on cooperative efforts with surrounding Townships and the City of Zeeland.



# Chapter 2 ~ Demographics ~

In order to adequately plan for the future a community needs to understand trends occurring in its population. Many questions about households, housing and employment are relevant when officials are making community decisions. For example, a young family has different needs than a senior citizen in terms of housing options. This chapter provides an overview of basic population statistics to provide a framework of Zeeland Township’s demographics, taken at the time of the 2000 Census.

## Population

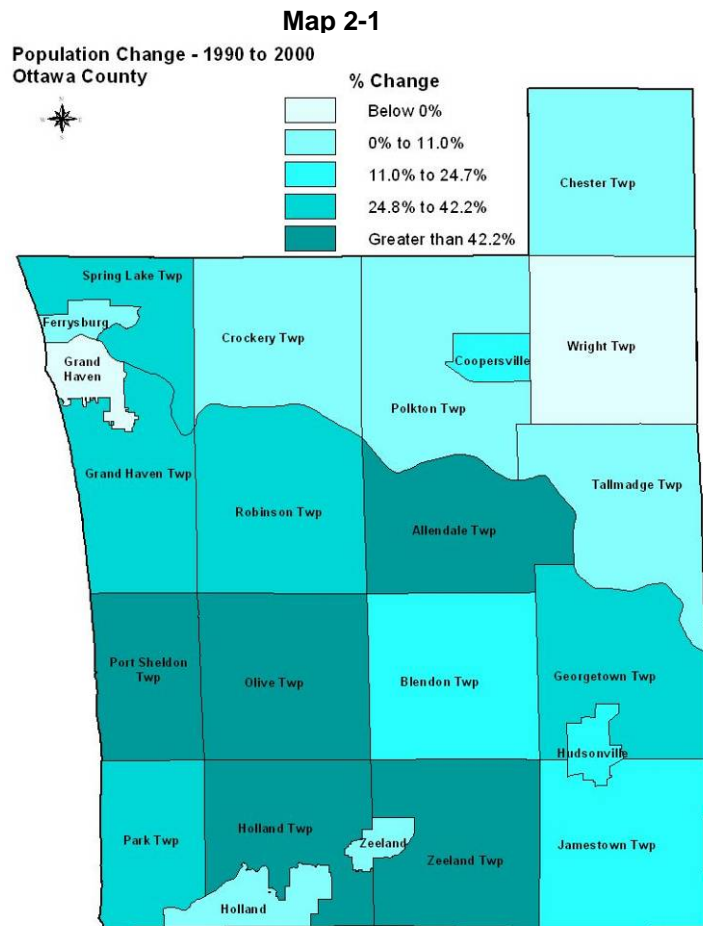
**Table 2-1: General Population**

	1980	1990	2000	% Change 1980 to 1990	% Change 1990 to 2000	Projected 2020 Pop.
<b>Zeeland Twp.</b>	3,711	4,472	7,613	20.5	70.2	16,738
<b>City of Zeeland</b>	4,764	5,417	5,805	13.7	7.2	6,757
<b>Ottawa County</b>	157,174	187,768	238,314	19.5	26.9	393,643

Sources: U.S. Census Bureau and West Michigan Regional Commission

Zeeland Township is currently experiencing a population boom, as is shown by the table above. While population growth in the City of Zeeland has remained generally steady, the Township has grown in population by over 70% in the last 10 years, and has overtaken the City in sheer numbers during this time period as well. In fact, Zeeland Township’s population grew by a larger amount than any other community in Ottawa County between 1990 and 2000, according to U.S. Census figures. Projections by the West Michigan Regional Commission show this trend continuing for another 20 years with Zeeland Township’s population predicted to more than double in size by the year 2020 (See Table 2-1).

As can be seen by Map 2-1, the Ottawa County communities which increased in population the most over the past decade are those that surround and are closest to the



Source: U.S. Census - 1990 and 2000 Census



boundaries of the cities of Grand Haven, Holland, Zeeland and Hudsonville. This suggests a trend of population leaving the cities and moving within easy commuting distance into the surrounding townships. Given Zeeland Township's location centralized between the City of Holland and the Grand Rapids metro area, it is a convenient and logical place for commuters from either (or both) areas to locate. Lake Michigan and the I-196 corridor are also strong attractors. Zeeland Township also still has land available for development whereas the cities have less land available for additional development. For Zeeland Township, this indicates a probable continued trend of a high growth rate and the development pressures which will most likely come with it.

**Age**

From 1990 to 2000 the age breakdown in Zeeland Township generally remained the same, with the bulk of the population falling between the ages of 5 and 44 (See Table 2-2). Although the actual number of senior citizens (over age 65) grew by 200 people during the past decade, the percentage of seniors in the total population actually fell slightly. In contrast, the number of seniors in the City of Zeeland grew by around 350 people (about 5%) during the same time period. The percentage of seniors in the City was 18.4% as of the 2000 Census whereas the Township's percentage was only 7.7%. The number of persons aged 25 to 44 dropped in the City of Zeeland by almost the same percentage, and the number of children under 5 dropped by about 2%. These figures also support the trend discussed earlier of younger, working-age people and families moving from the City to the outer Township areas.

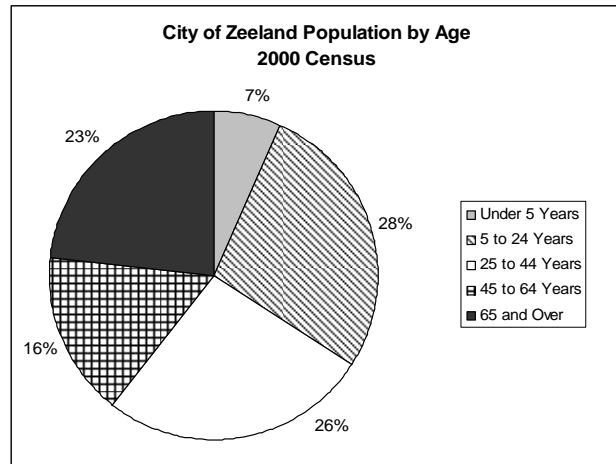
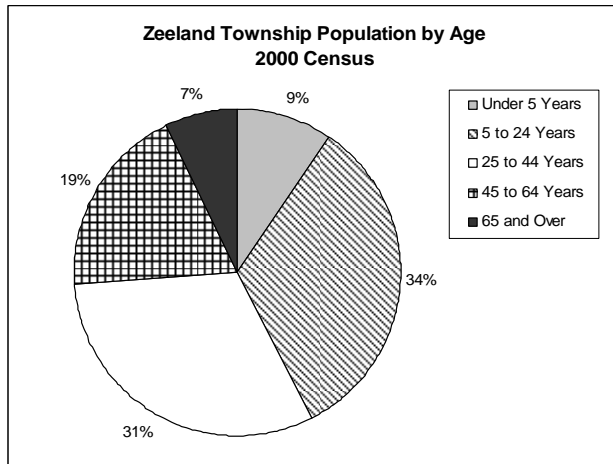
**Table 2-2: Population by Age**

	Year	Zeeland Twp.		City of Zeeland		Ottawa County		State of Michigan	
<b>Total Population</b>	2000	7,613	100%	5,805	100%	238,314	100%	9,938,444	100%
	1990	4,472	100%	5,417	100%	187,768	100%	9,295,297	100%
<b>Under 5 Years</b>	2000	718	9.4%	384	6.6%	18,242	7.7%	672,005	6.8%
	1990	452	10.1%	449	8.3%	16,013	8.5%	702,554	7.5%
<b>5 to 24 Years</b>	2000	2,509	33%	1,602	27.6%	78,473	32.9%	2,855,899	28.7%
	1990	1,444	32.3%	1,558	28.8%	61,208	32.6%	2,760,738	29.7%
<b>25 to 44 Years</b>	2000	2,395	31.5%	1,536	26.5%	69,834	29.3%	2,960,544	29.8%
	1990	1,471	32.9%	1,637	30.2%	60,456	32.2%	2,980,702	32.1%
<b>45 to 64 Years</b>	2000	1,441	18.9%	933	16.1%	47,653	20%	2,230,978	22.4%
	1990	758	17.0%	778	14.3%	31,797	16.9%	1,742,842	18.7%
<b>65 and Over</b>	2000	550	7.2%	1,350	23.3%	24,112	10.1%	1,219,018	12.3%
	1990	347	7.7%	995	18.4%	18,474	9.8%	1,108,461	12.0%

Source: U.S. Census Bureau



In general, the age breakdown in Zeeland Township in 2000 was skewed more toward the family age groups (5 through 45-year-olds) as compared to Ottawa County and the State of Michigan.



**Race and Ethnicity**

As Table 2-3 shows, Ottawa County in general contains very few minorities, although the ratio of white population to other racial and ethnic groups has decreased slightly from 1990 to 2000. In Zeeland Township there was only one African American person counted in the 1990 census. In 2000 there were 47, which still made up less than 1% of the population. The largest minority category in both the City and Township of Zeeland is the ‘other’ category, at 5.3% of the total population for the Township and 4.0% for the City. It can be assumed that most of the persons in this category are of Hispanic origin, because the percentages of persons listing themselves as of Hispanic/Latino origin (shown in Table 2-4) fall closely in line with those numbers (6.3% in the Township and 4.6% in the City).

**Table 2-3: Race and Ethnicity**

	Year	Zeeland Twp.		City of Zeeland		Ottawa County		State of Michigan	
<b>Total Population</b>	2000	7,613	100%	5,805	100%	238,314	100%	9,938,444	100%
	1990	4,472	100%	5,417	100%	187,768	100%	9,295,297	100%
<b>White</b>	2000	6,994	91.9%	5,451	93.9%	218,105	91.5%	7,966,053	80.2%
	1990	4,430	99.1%	5,178	95.6%	179,675	95.7%	7,756,086	83.4%
<b>African American</b>	2000	47	0.6%	34	0.6%	2,497	1.0%	1,412,742	14.2%
	1990	1	0%	23	0.4%	997	0.5%	1,291,706	13.9%
<b>Asian</b>	2000	138	1.8%	76	1.3%	4,991	2.1%	176,510	1.8%
	1990	6	0.1%	96	1.8%	2,451	1.3%	104,983	1.1%
<b>Native American*</b>	2000	29	0.4%	9	0.2%	896	0.4%	61,171	0.6%
	1990	10	0.2%	8	0.1%	638	0.3%	55,638	0.6%
<b>Other</b>	2000	405	5.3%	235	4.0%	11,825	5.0%	321,968	3.2%
	1990	25	0.6%	112	2.1%	4,007	2.1%	86,884	0.9%

Source: U.S. Census Bureau





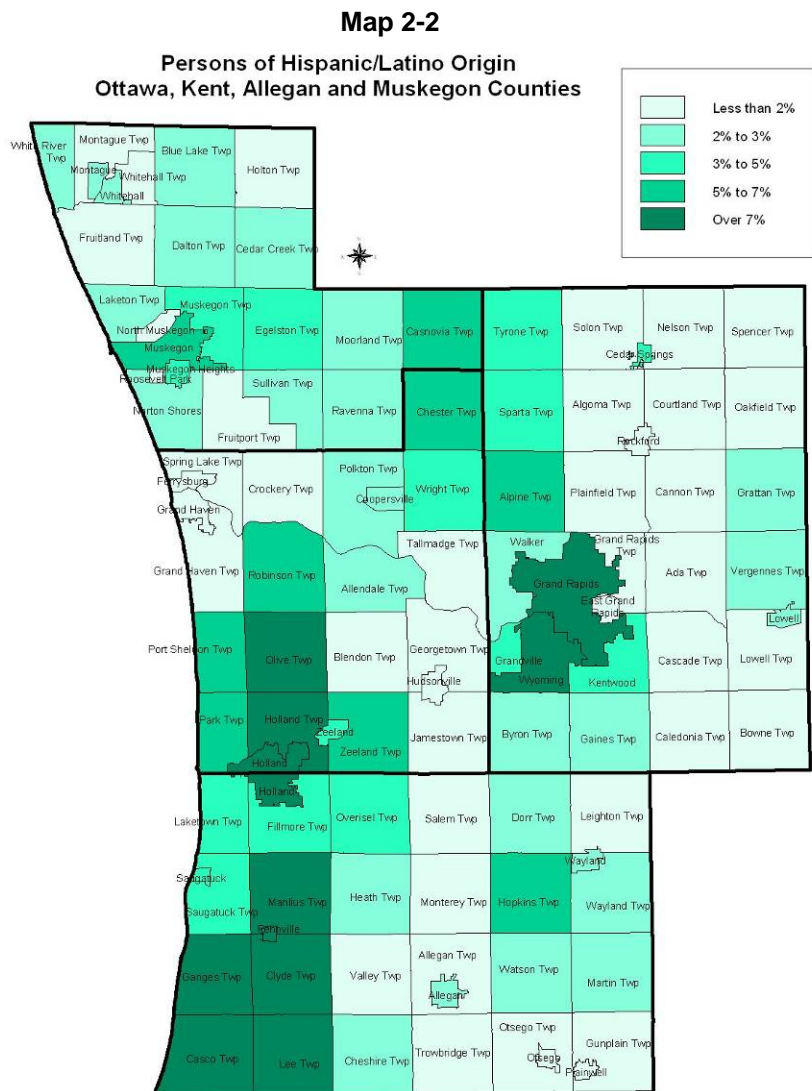
Table 2-4: Persons of Hispanic/Latino Origin – 2000 Census

	Total Population	Hispanic/Latino Origin		Non-Hispanic/Latino Origin	
<b>Zeeland Twp.</b>	7,613	481	6.3%	7,132	93.7%
<b>City of Zeeland</b>	5,805	269	4.6%	5,536	95.4%
<b>Ottawa County</b>	238,314	16,692	7.0%	221,622	93.0%
<b>Muskegon County</b>	170,200	6,001	3.5%	164,199	96.5%
<b>Allegan County</b>	105,665	6,040	5.7%	99,625	94.3%
<b>Kent County</b>	574,335	40,183	7.0%	534,152	93.0%
<b>State of Michigan</b>	9,938,444	323,877	3.3%	9,614,567	96.7%

Source: U.S. Census Bureau

Ottawa County in general has a large number of persons of Hispanic/Latino origin (7%), especially as compared to other surrounding counties and the State in general. The only nearby county which has a similar percentage of Hispanic/Latino persons is Kent County, which has the same percentage as Ottawa. Both Muskegon and Allegan Counties have much lower percentages, at 3.5% and 5.7% respectively. The only nearby areas with higher percentages are both the City and Township of Holland, and Olive Township.

The portions of West Michigan with the highest concentrations of persons of Hispanic/Latino origin are generally in or near the larger cities and urban areas and also in the areas where migrant labor has been used for farming purposes. As seen in Map 2-2, Zeeland Township's proximity to the City of Holland results in a





higher percentage of Hispanic/Latino persons than in more outlying areas of Ottawa County or those areas further to the east, away from fruit farms or other areas where migrant labor is commonly used.

**Household Size and Family Composition**

There are just over 2,000 households within Zeeland Township (2,523 total). Of these, over half are occupied by three or more persons, suggesting a dominant family pattern. These numbers are substantially different from those in the City of Zeeland, which shows slightly more than one third of households in this category, but a much higher percentage of one-person households. Ottawa County’s household profile is similar to the Township’s, but with a slightly higher proportion of one and two person households.

Again, this would suggest a Township trend toward a population made up of younger families. The fact that the population in Zeeland Township is relatively young (over 60% between the ages of 5 and 44 as shown above in Table 2-2) also tends to support the idea of younger families making up the majority of the population of households in the Township.

**Table 2-5: Household Size by Percentage**

	<b>Total # of Households</b>	<b>One Person</b>	<b>Two Persons</b>	<b>Three Persons</b>	<b>Four Persons</b>	<b>Five or More Persons</b>
<b>Zeeland Twp.</b>	2,523	13.6%	34.0%	15.1%	19.9%	17.4%
<b>City of Zeeland</b>	2,283	32.3%	32.1%	10.3%	14.0%	11.3%
<b>Ottawa County</b>	81,622	19.6%	33.0%	15.8%	17.7%	13.9%

Source: U.S. Census Bureau

Both the City and the Township of Zeeland have a similar average family size, 3.13 persons in the City versus 3.33 persons in the Township. These numbers align closely with those for both Ottawa County (3.25 persons) and the State of Michigan overall (3.10 persons). Families in Zeeland Township (as also suggested by the household numbers above) are made up almost entirely of married couples (85.3%), with smaller numbers of families headed by either a single female (10.5%) or single male (4.1%). These percentages are also closely in line with those for Ottawa County (86% married, 10% single female and 4.1% single male families), although the State of Michigan has a much higher percentage of families headed by a single female (18.4%) and therefore a correspondingly smaller number of married couple families (75.6%). Six percent of families in the State are headed by single males.

**Place of Birth and Resident Influx**

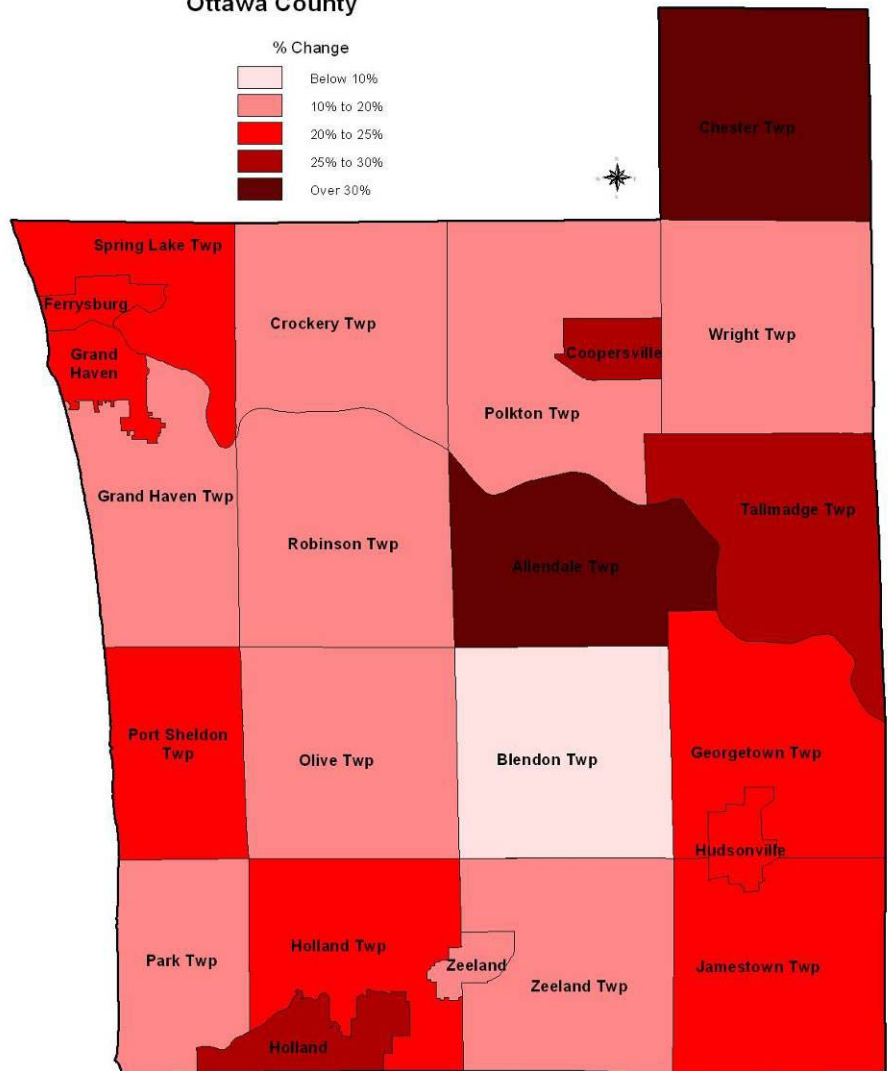
Almost the entire population in Zeeland Township (96.2%) was native born in the United States, based on 2000 Census figures. Only a small percentage of the population is either naturalized citizens (1.7%) or are not US citizens (1.8%). These figures are similar to those for Ottawa County in general (94.5% native born in US, 2.3%



naturalized citizens, 2.6% non-citizens). Of those people in Ottawa County not born in the US, the greatest numbers were born in the Netherlands (50.1%), with the United Kingdom and Germany next (13.0% each).

The population within Ottawa County and Zeeland Township in particular, is growing and shifting. The resident influx numbers (see Map 2-3) show what percentages of new residents in each township and city are new to Ottawa County as well. Between 1995 and 2000 between 10% and 20% of new residents to the Township were also new to Ottawa County as a whole. The resident influx within all of Ottawa County during the time period between 1995 and 2000 shows similar growth, as every township, village or city within the County (except Blendon Township) had a resident influx of at least 10%.

**Map 2-3**  
Resident Influx - 1995 to 2000  
Ottawa County



Source: US Census - 1990 and 2000 Census

**Educational Attainment**

Of the total population in Zeeland Township who are over 25 years of age, most have completed high school (83.8%) and many have a bachelors degree or higher (18.8%). Although these percentages are quite high in general, they are in fact less than those in other areas of Ottawa County, and less than the County as a whole (see Table 2-6). The City of Ferrysburg has the highest percentage of people with college or graduate degrees (40.6%) and Olive Township has the lowest (8.2%). Zeeland Township falls within the average range with 18.8%, although this is less than the State percentage of 21.8%.



Zeeland Township has one of the higher percentages of those who have not completed 9<sup>th</sup> grade (7.6%), surpassed only by Olive Township (8.3%), Polkton Township (8.5%), the City of Zeeland (9.0%) and the City of Holland (10.3) within Ottawa County. Ottawa County in general has a higher percentage than nearby counties, with only Allegan County being higher at 6.0% versus Ottawa County's 5.2%.

**Table 2-6: Educational Attainment**

	<b>Zeeland Township</b>	<b>City of Zeeland</b>	<b>Ottawa County</b>	<b>State of Michigan</b>
<b>Less than 9<sup>th</sup> Grade</b>	7.6%	9.0%	5.2%	4.7%
<b>High School Graduate</b>	38.8%	34.6%	31.1%	31.3%
<b>Associate Degree</b>	7.4%	5.1%	7.5%	7.0%
<b>Bachelors Degree</b>	12.8%	15.3%	18.0%	13.7%
<b>Graduate/Prof. Degree</b>	6.0%	6.7%	7.9%	8.1%
<b>High School or higher</b>	83.8%	81.8%	86.6%	83.4%
<b>Bachelors Degree or higher</b>	18.8%	22.0%	26.0%	21.8%

Source: U.S. Census Bureau

**Income and Poverty Levels**

The Census measures income in three ways; 1) median household, which is the average of all households (non-family and family); 2) median family, which is the average of all family households, including single parents, and; 3) per capita income, which averages all incomes among the entire population, including non-workers like children.

Although the figure for per capita income in Zeeland Township increased by around \$6,000 between 1989 and 1999, it was below those of both Ottawa County and the State of Michigan in both years, as shown in Table 2-7. The Township's per capita income in 1999 dropped below that of the City of Zeeland where in 1989 the figure had been slightly higher than the City's. However, the City's per capita income was also below that of the County and State in both 1989 and 1999 as well.

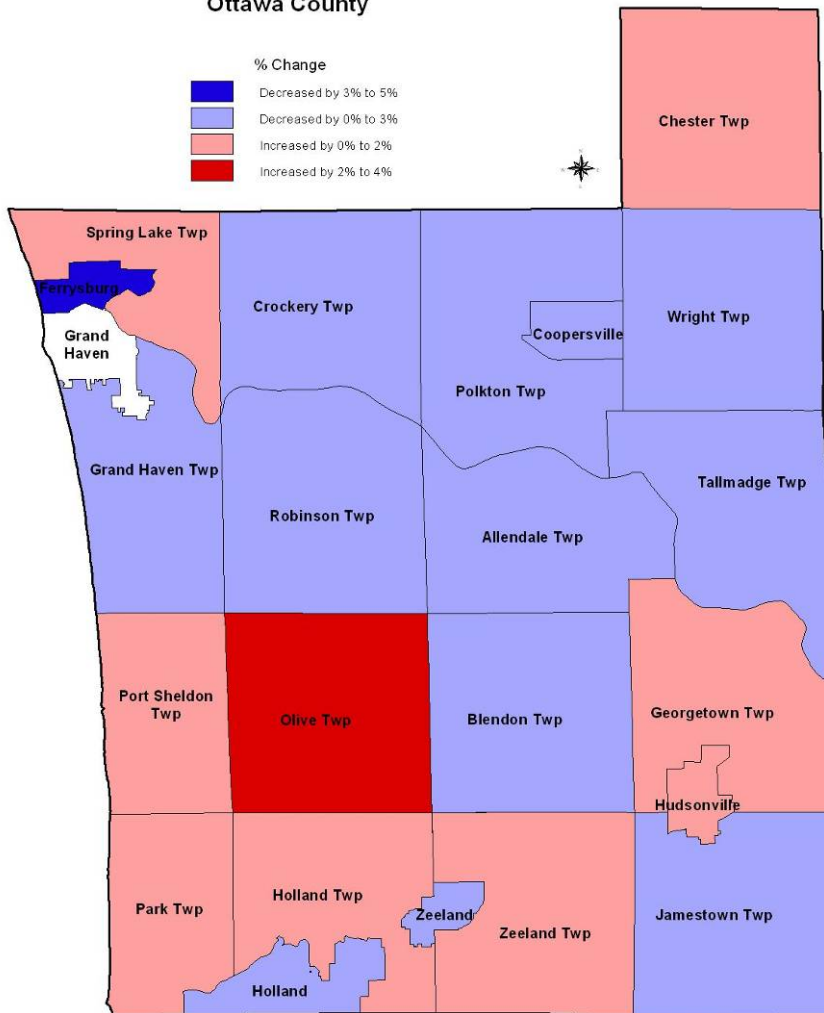
**Table 2-7: Income in 1999**

		<b>Zeeland Township</b>	<b>City of Zeeland</b>	<b>Ottawa County</b>	<b>State of Michigan</b>
<b>Per Capita Income</b>	1999	\$19,295	\$20,801	\$21,676	\$22,168
	1989	\$13,494	\$12,778	\$14,347	\$14,154
<b>Median Household Income</b>	1999	\$52,079	\$45,611	\$52,347	\$44,667
	1989	\$34,135	\$32,861	\$36,507	\$31,020
<b>Median Family Income</b>	1999	\$57,423	\$53,227	\$59,896	\$53,457
	1989	\$35,982	\$37,614	\$40,377	\$36,652

Source: U. S. Census Bureau



**Map 2-4**  
Poverty Rate Change - 1989 to 1999  
Ottawa County



Source: US Census - 1990 and 2000 Census

When looking at median household income, the figures for Zeeland Township fall rather closely in line with those for Ottawa County, with incomes increasing by almost \$20,000 between 1989 and 1999. These amounts are higher than those of the City of Zeeland and the State of Michigan for both years. In fact, Zeeland Township's median household income in 1999 was over \$7,000 higher than that of the State, and although lower than Ottawa County's, the difference was by less than \$200, versus having been over \$2,000 less in 1989.

In 1989, Zeeland Township's figure for median family income was below that of the City of Zeeland, Ottawa County and the State of Michigan. But by 1999, Zeeland Township's median family income had grown by over

\$20,000 to overtake that of the City and State. Ottawa County's median family income was still higher than the Township's, but only by around \$2,000 versus a difference of over \$4,000 in 1989.

Zeeland Township's poverty level has grown over the past few decades, from 2.9% in 1979, to 4.7% in 1989 and to a high of 6.3% in 1999. Although the poverty level in 1999 was higher than both the City of Zeeland (4.6%) and Ottawa County (5.5%), it was much lower than the State of Michigan, which fell from 13.1% in 1989 to 10.5% in 1999. While Zeeland Township's poverty level grew from 1979 to 1999, the poverty level in the City of Zeeland fell during the same time periods, from a high of 6.7% in both 1979 and 1989 to the current rate of 4.6%. Ottawa County's poverty level has remained consistently between 5.5% and 6.0%. While Zeeland Township's poverty level stands out in comparison with the County and City, it remains over 4% lower than that of the State.



**Employment**

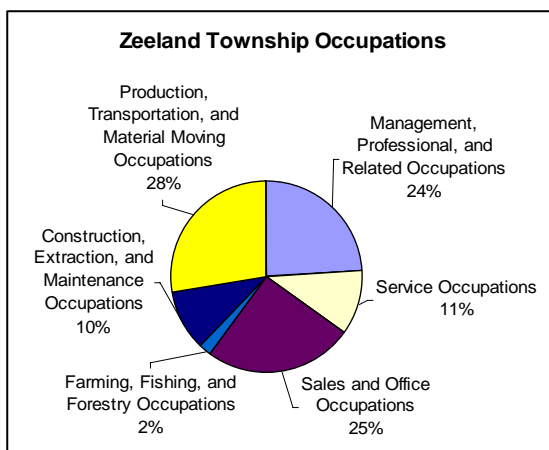
According to the Michigan Economic Development Corporation (MEDC), the unemployment rate in Ottawa County for 2001 was 4.3%, which was lower than the State of Michigan, at 5.3%. The unemployment rate in Zeeland Township was lower than both the County and State, with only 2.4% unemployed. By comparison, the unemployment rate in the City of Zeeland was more in line with that of Ottawa County, at 4.1% for 2001.

In 2001, over 35% of Ottawa County workers were employed outside of the County, and 3.1% worked from home, according to the MEDC. The 2000 Census reported that only 15% of Township workers over 16 years of age who lived in the Township also worked there. This means that 85% of the workers commute to work outside of the community, supporting the idea that Zeeland Township has become a bedroom community.

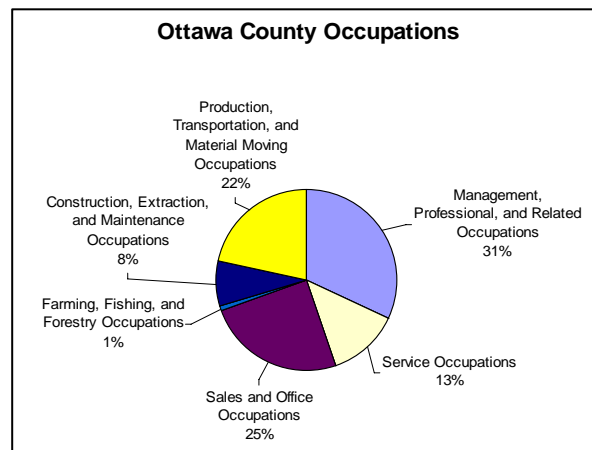
**Table 2-9: Occupation by Gender**

Occupation		Zeeland Township	City of Zeeland	Ottawa County	State of Michigan
Employed Civilian Population Over the Age of 16	Male	52.9%	51.4%	54.0%	53.0%
	Female	47.1%	48.6%	46.0%	47.0%
Management, Professional, and Related Occupations	Male	13.8%	14.5%	16.9%	15.9%
	Female	10.3%	12.5%	15.0%	15.5%
Service Occupations	Male	3.2%	3.9%	4.6%	5.7%
	Female	7.6%	11.0%	8.1%	9.1%
Sales and Office Occupations	Male	7.8%	8.3%	8.9%	8.6%
	Female	17.2%	18.4%	15.8%	17.0%
Farming, Fishing, and Forestry Occupations	Male	0.5%	0.0%	0.5%	0.3%
	Female	1.6%	0.0%	0.2%	0.1%
Construction, Extraction, and Maintenance Occupations	Male	10.3%	7.0%	7.8%	8.8%
	Female	0.0%	0.3%	0.2%	0.4%
Production, Transportation, and Material Moving Occupations	Male	17.2%	18.3%	15.3%	13.7%
	Female	10.5%	6.3%	6.4%	4.8%

Source: U.S. Census Bureau



Source: U. S. Census



Source: U. S. Census



More recent data gathered by the Township reflects an emerging employment center. Ten employers located in Zeeland Township provide nearly 1,400 jobs as follows in Table 2-10 below. It is unknown where these employees reside, whether in Zeeland Township or in outlying areas.

**Table 2-10: Township Employers**

<b>Employer</b>	<b>Approximate Number Of Employees</b>
Walters Gardens	350
Herman Miller Market Place (office building)	297
Empire Distributors	175
Zeeland Farm Services	145
Primera Plastics	117
Family Fare	90
Total Logistic Control	76
Custom Tooling Systems	55
Town & Country	50
Thoroughbred Fulfillment	35


**Summary**

Zeeland Township is a rapidly growing community experiencing a population boom in recent years, most likely due to the convenient location of the Township between the cities of Holland and Grand Rapids, along I-196. The majority of Zeeland Township’s population is between the ages of 5 and 44 years, suggesting a trend of younger families or couples moving into the area. This is further borne out by the fact that a majority of the Township’s households include 3 or more persons. Although the numbers of minorities in the area has grown over the past 10 years, the Township still has a significant white population (over 90%) in the 2000 Census.






The percentage of the total population in poverty doubled between 1989 and 1999 while the state rate dropped. Persons in poverty in the Township are primarily single-parent households and senior households. The Township will want to be mindful that while wealth is locating in the Township there is still a growing number of households and families with limited resources.

Census figures show that over 80% of the Township’s population had completed high school or a higher degree and that the median family income in Zeeland Township was higher in 1999 than that in the City of Zeeland or the State of Michigan as a whole.

Township population trends will likely result in several issues, including:

-  As the population of Zeeland Township continues to grow, additional development pressure will almost definitely be felt by Township officials.



-  Continued development will change the face of the Township to be more suburban in nature than rural. The placement and design of such development will be important to maintain the quality of life in the Township.
-  With a great deal of the population commuting to jobs outside of the Township, traffic flow along major roadways will become a challenge.
-  The increase in population will cause demand for additional public resources and facilities such as schools, police and fire protection, parks and expanded utilities.
-  Median family incomes have increased significantly in the Township. Poverty levels have also increased. This divergence of income levels within the community should be kept in mind when planning for community services. It is difficult for a household of very limited means to keep a basic standard of living in an area with an increasing cost of living. Some young families, single parent households, or senior households may be under increasing financial stress.
-  With an influx of new population will come new diversity in race, ethnicity, and economic status. Planning for a more diverse population with a variety of preferences and needs will become more of a challenge for the community.





## Chapter 3 ~ Natural Features Analysis ~

The natural and man-made environment shapes the character of a community. In the past, Zeeland Township has flourished as a farming community because of rich soils. When Chicago Drive and the highway cut through the Township they fundamentally changed the landscape and increased development pressure. While large parcels and prime soils are still present in the Township, market pressure from surrounding areas is pushing significant development into the area.

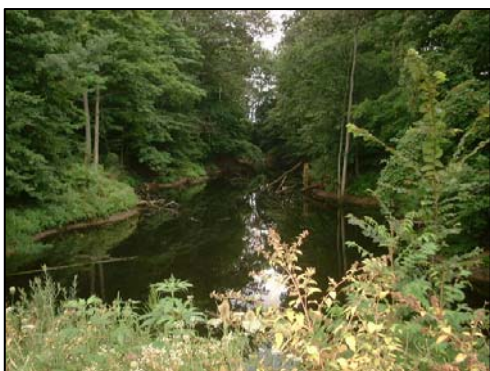


The natural features found within Zeeland Township, and how those features interact with each other in the ecosystem, are critical considerations for the future of the Township (see Natural Features Map, page 16). Understanding the location and complexity of local resources will allow Zeeland to grow while maintaining many of the important aesthetic qualities that residents value as rural in nature.

Development within the Township should be directed to areas that can best sustain the physical changes to the landscape without negatively impacting the Township's natural features. Conversely, those areas of the Township that are deemed to have high environmental value should be master planned in a way that best protects the resource.



Natural features include such things as wetlands, woodlands, rolling terrain, rivers, streams, and open space and are a big part of the reason why many residents have chosen Zeeland Township as their home. Likewise they have some expectation that many of these features will be protected.



The Township has faced significant development pressure throughout the past decade that is expected to continue into the future. The Township's central location in the regional growth center of Grand Rapids and Holland creates a challenge. Much of this development pressure will be focused on areas of the Township that currently include natural features, because of their aesthetic qualities and pleasant atmosphere. Without persistent attention many local natural features may be lost, and the character of the Township will be changed forever. This is not to say

development in these areas should be avoided, but the **placement and design** of development is critical.



**Insert Natural Features Map**



## **Soils**

Understanding the composition of soils in Zeeland Township is important because soil properties dictate such things as storm water drainage, septic field placement, and the nature of building foundations. In the Township's case, unique soils such as the rich, hydric muck that has supported vegetable and greenhouse industries for decades are an important economic resource. They also have severe limitations for development.

In general, soils found within Zeeland Township are reflective of the low lying river basin of the Macatawa River which runs through the Township (see Soils Map on page 18). Typical soils found along the river way include a variety of loams and sandy loams that are classified as hydric soils. Hydric soils are soils formed under conditions of saturation, flooding or ponding. Hydric soils tend to have a high water table and need artificial draining in order to be developed. Hydric soils following the Macatawa River have promoted low density agricultural uses primarily north of Chicago Drive and east of 64<sup>th</sup> Avenue. The railroad bed and Chicago Drive have further isolated these areas from development pressure.



Heavy or hydric soils and natural topography prevent economic expansion of sewer west of 64<sup>th</sup> Street. Because of reliance on individual septic systems and wells in many of these areas, coupled with the fact that heavy or hydric soils and a high water table are present on many parcels, development densities are low, and should remain so.

Surface and groundwater quality are of concern where fertilizer and pesticide runoff, septic effluent, and spills or leaking of hazardous materials can reach water supplies. Preventative action like public education and design criteria which protects water supplies from the negative impacts of development are important Township considerations.





**Insert soils map**



## **Topography**

Like much of West Michigan, the gently rolling surface features of Zeeland Township were created largely from glacial activities. Elevation lines and river ways marked on topographic maps can be used to determine drainage patterns and areas with slope limitations. Topographic maps are also useful for determining how an area may influence or be influenced by water runoff from neighboring areas. See Topographic Map, page 21.

The topography of Zeeland Township consists of relatively low areas ranging from 577 to 784 feet above sea level. With a total change in elevation of 200 feet throughout the entire Township, the area has natural views of wide open, rolling terrain. The natural elevation changes also provide for natural drainage to the Lake Macatawa watershed.

The points of highest elevation in the Township are essentially east of 68<sup>th</sup> Avenue and south of Chicago Drive. Another higher topographic area exists northwest of Chicago Drive westerly of 64<sup>th</sup> Avenue (see again the Township Topography Map). A challenging area for development that should be noted is along Chicago Drive, where hills rise up relatively quickly adjacent to the travel corridor. This is particularly challenging for more intense uses which generate higher traffic volumes. Winding driveways with steep slopes entering a stream of traffic can pose safety hazards. This area is currently predominantly low density residential and should remain so. The topography in this case is a natural and attractive barrier to prevent strip commercial development along the entire frontage of Chicago Drive. On the north side of Chicago Drive low areas with muck soils and the existing railroad bed impede high density development.

## **Woodlands and Wildlife Habitat**

Prior to European settlement, Beech-sugar maple forests were the prominent cover in Zeeland Township. While the majority of the forests and cedar swamps were cleared for farming and homesteads, there still remain a few intact areas of tree stands that dot the landscape, providing windbreaks and wildlife habitat. These tree stands also offer privacy for residents and buffer noise from the major transportation corridors that run through the community. There are currently 181 acres of designated woodlands, averaging less than 1% of the Township's land base.

Wildlife is a component of rural living. The wildlife habitat of the Zeeland Township is challenged by three major transportation corridors of I-196, Chicago Drive, and the CSX Railroad. A wildlife corridor is a continuous, natural, protected pathway along which native wildlife species can move in relative security between high-quality natural wildlife habitats. Heavily traveled transportation corridors impede animal migration.

Scattered new development can also create negative wildlife impacts, including both their loss of habitat and their reliance on property owner's landscaping as a new food resource. Current land use patterns show a trend towards single-family homes along



section line roads, with the center portions of the sections left vacant as undeveloped open space or used for agriculture. This can create fragmented woodlots and open spaces that permanently alter natural wildlife corridors.

In rural areas that are facing increased growth and development pressure, there is opportunity to actively seek out open space connections through developments when they are reviewed. Promoting new developments that provide for natural greenbelts, wildlife corridors, wetlands and open space in their plans helps to both maintain rural character and enhance wildlife habitat. For Zeeland, augmenting development sites that have limited trees and natural shrubbery can actually create rural character and wildlife habitat.

### **Watersheds**

Zeeland Township is located within the Lake Macatawa Watershed. This means that any water that drains out of the Township will run through the county drains and creeks and into Lake Macatawa. The Lake Macatawa Watershed is located in a highly urbanizing area of the state and includes nine municipalities within its watershed boundary including the Cities of Holland and Zeeland, as well as Fillmore, Holland, Laketown, Olive, Zeeland, Port Sheldon, and Park Townships.

Surface water features, such as creeks, rivers and lakes are directly affected by runoff from surrounding land uses. Soil erosion, sediment, pollutants rinsed from parking lots or roof tops, and overuse or misuse of fertilizers and pesticides can negatively impact the quality of the watershed system. Natural measures to protect water quality, such as preservation and enhancement of existing wetlands and retention or enhancement of natural buffer strips along waterways or drainage ways should be utilized throughout the Township.

The Macatawa watershed is stricken with consistently high levels of phosphorus that age the watershed by decreasing the natural life span of the lake. With strong regional ties to horticultural production, landscaping and manicured lawns are a sign of proud homeownership in the Zeeland area. The fertilizers and lawn treatments necessary to maintain green, manicured lawns, however, exceed many of the recommended nutrient levels that can maintain a healthy watershed system.

Because of the expected increase in population, the Macatawa Watershed area should be actively managed to help reduce phosphorus levels in the watershed. The Township can help by maintaining an active level of participation with public education campaigns to improve the overall water quality in the region.



**Insert Topographic map**



## **County Drains**

A county drain may be an open ditch, stream or underground pipe, retention pond or swale that handles storm water. Typically, county drains either drain agricultural lands or are located in areas that have lost their natural ability to handle storm events because of increased development. County drains can protect surface waters and the environment by providing proper storm water management through flood and soil erosion control measures. Improperly managed and maintained, they can also quickly transport murky sediment and pollutants to streams, rivers and lakes.

When land is developed, natural vegetation is replaced with rooftops, roads, parking lots, driveways, and sidewalks. These hard surfaces (known as impervious surfaces) do not allow rain to soak into the ground. Rain water that was once largely absorbed by the soil and vegetation is now being conveyed from these hard surfaces by pipes, ditches, and canals to nearby lakes, rivers, and streams. These impermeable surfaces and water conveyances increase the volume of storm water runoff and the amount of pollutants carried to nearby water bodies. Historically engineered retention or detention ponds have been a preferred method of storm water control, however, more creative approaches like rain gardens, recessed landscape islands, and augmented or engineered wetlands are found to be more aesthetically pleasing. Further, it is a more cost-effective practice to design developments that naturally manage storm water on site rather than expediting it off the site to water bodies.

Within Zeeland Township, the Eastern Macatawa Watershed, with its adjacent wetlands and floodplains, provides natural drainage for excess storm water in the Township. Properly managed and accentuated, this resource can serve several vital functions including storm water management, wildlife habitat, and recreational opportunities.

## **Groundwater**

Ground water is an important source of drinking water for Township residents. Ground water recharge areas are locations where significant amounts of rain and snow melt filter back into the ground to feed ground water or aquifers. Three main factors determine groundwater vulnerability to pollutants: soils, depth to the groundwater aquifer, and general aquifer condition and type.

Groundwater resources may be directly affected by increasing levels of septic system use, overuse of pesticides and herbicides, inappropriate land application of manure, industrial spills or leaking underground storage tanks. Future land uses and management of existing uses in Zeeland Township should be carefully planned for with respect to groundwater recharge areas. Attempting to restore the groundwater resource after contamination would be both cost prohibitive and inconvenient.

Although groundwater resources are not easily seen or understood, they are important to all residents. Groundwater also helps to dilute waste from septic systems, recharge local wetlands, streams and lakes, as they serve the important ecological functions of providing water to the Township's plants and animals.





## Wetlands and Floodplains

Wetlands are complex ecological systems that function in a number of beneficial ways. Wetlands reduce flood hazards by providing storm water storage. Wetlands that overlay groundwater recharge areas improve groundwater quality by filtering the water as it percolates through the soil. They act similarly near surface water by filtering run-off from built areas. They are highly productive ecosystems which provide an essential habitat to much of Michigan's fish and wildlife at some time during their life cycle. Wetlands are also an important component of rural character.

Part 303 of the Natural Resources and Environmental Protection Act (NREPA) defines a wetland as:

*Land characterized by the presence of water at a frequency and duration sufficient to support, and that under normal circumstances does support, wetland vegetation or aquatic life and is commonly referred to as a bog, swamp or marsh.*

The most recent land use data shows that Zeeland has approximately 716 acres of wetlands that comprise roughly 3% of the total land base. Although a large amount of the pre-settlement wetlands have been drained for other purposes, there remain a few scattered pockets of wetlands throughout the southwest portion of the Township and adjacent to local drains. A large portion of existing wetlands has been permanently preserved through the acquisition of property by the Ottawa County Parks Department in the Southwest quadrant of the Township totaling over 461 acres of property.

Floodplains are areas where floodwaters spread when the natural stream or river channel overflows its banks during a major storm water event. They may or may not be wetlands. In Michigan, and nationally, the term floodplain means the land area that will be inundated by the overflow of water resulting from a 100-year flood event. Development in floodplains is regulated under Part 31 Water Resources Protection of the Natural Resource Environmental Protection Act, as well as through the Federal Emergency Management Agency (FEMA).

Filling, grading and construction within and adjacent to these floodplain areas can exacerbate flood events by decreasing its natural ability to hold water. Impervious surfaces, such as paved parking lots and compacted soils, and loss of wetlands can affect the severity of flood events in the area and damage the functions of a floodplain by choking it with sediment or scouring out streambeds and destroying fish and wildlife habitat.

Floodplains are currently being mapped for areas north of I-196 under the FEMA program. Wetlands and floodplains, regardless of their formal designation by the state or federal government, are important natural features that serve several roles for a community. Recognizing and protecting these features enhances rural character and quality of life for both residents and wildlife.








## Greenways

Zeeland Township is the home of the Upper Macatawa River conservation site which is 461 acres which is located east of 84th Avenue and south of I-196. The majority of the site is a 325 acre farm acquired by the County Parks Department in January 2003, but also includes 76 acres of contiguous land acquired in 2000 and 60 acres of adjacent floodplain forest acquired from the Ottawa County Road Commission in 2003.

Together, these properties include about 2.5 miles of Macatawa River frontage, occupy approximately 2% of the Townships' land base and will provide needed park and open space land in a rapidly growing community.

## Summary

-  While the Township has undergone extensive growth in the past decade, much of the land area remains undeveloped in an agricultural state. This land may be considered ripe for development in the coming decades if current growth scenarios continue to increase. This reflects a land in transition and one that needs active and consistent planning.
-  Woodlands have not been a dominant land cover in the Township, yet through new developments that occur within the area, opportunities exist to encourage native plantings and promote tree preservation in any site plan review. Because of their value for wildlife habitat, soil erosion control and rural aesthetics, maintaining and promoting significant new tree plantings for commercial, industrial and residential uses should be encouraged.
-  Overall, development patterns have been dictated by both natural and man-made influences within the Township. Current trends show single-family homes developing along major roadways, with the center portions of the sections left vacant as undeveloped open space agricultural fields.
-  Vulnerable soils that have limited building and septic field capacities should be evaluated for the protection of groundwater supplies that service the drinking water needs of the Township.
-  Although a large amount of the pre-settlement wetlands have been drained for other purposes, there remain a few scattered pockets of wetlands throughout the southwest portion of the Township and adjacent to the Macatawa watershed. Because of the estimated population growth within the region, major educational initiatives will need to be enacted in order to make positive steps toward staving off water quality and erosion problems.



# Chapter 4~ Development Trends ~

## Land Use

Agricultural production, including pastures, field crops and livestock is the dominant land use within the Township, with over 60% of the land base still dedicated to agricultural use. Agricultural lands are located in each section of the Township; however, the eastern half of the Township has the largest holdings of agricultural land (see existing Land Use Map on page 29). The 1993 Land Use Plan indicated that 78% of the Township was devoted to agricultural uses.

The western half of the Township surrounding the City of Zeeland has experienced the highest level of development, although other areas are also getting scattered residential development. Current land use patterns show a trend towards single-family homes along roads with some development on private roads.



Emerging residential developments in the form of subdivisions and large lot rural home sites continue to consume farmland. Residential encroachment and increasing property values will likely prevent existing agricultural operations from expanding and can affect their ability to be sustainable in the long term.



Agricultural conversion to residential uses is a natural process of fast-growing communities. Commuter residents desiring a rural setting within close driving distance to urban services find Zeeland Township a prime living destination. Ironically, if not well designed or controlled, this type of development can destroy the very amenities people moved out for in the first place—open space and a peaceful rural character.



In order to maintain sustainable agricultural practices in the future, the Township should seek to prevent urban and rural conflicts. Directing new development into areas with suitable public services while discouraging the expansion of low-density development into rural agricultural zones can assist in protecting the agricultural industry. Land

development in agricultural areas can be expensive to support and can result in conflicts between new residents and farmers. Community costs to support public services such as roads, schools and public safety, often outweigh the benefits the community receives in tax dollars for scattered development.



**Agricultural holdings are still large in certain parts of the Township.**

The largest concentrations of residential development are appropriately located near the City of Zeeland, south of Chicago Drive. A private air strip and single family housing are also found in a unique development off Air Park Road. Historically, large lot residential development has also been scattered along county roads throughout the Township and continues today. Newly emerging development is in the form of subdivisions and manufactured home parks, because land costs and market demand are high enough for developers to explore such options. The availability of sewer in large portions of the Township has also spurred development pressure and permitted higher densities in areas previously unsuitable for higher density development.



**Single-family and condominium development is keeping a brisk pace in the Township.**



**Commercial and service businesses have grown.**

Commercial development is somewhat scattered in the Township along Chicago Drive, 88<sup>th</sup> Street just north of the City of Zeeland, and along Byron Road. Smaller scale commercial uses are present in the settlements of Vriesland, and Drenthe. Note that many of the larger greenhouse operations were classified as commercial uses for the purposes of the Existing Land Use Map. While agricultural in origin, the



investment in land, buildings, trucking, and wholesaling operations suggests a more commercial agricultural operation than straight crop production.

Other than the sanitary landfill located in Section 36 of the Township, industrial uses are primarily located near the City of Zeeland, north of I-196, between 80<sup>th</sup> and 84<sup>th</sup> Streets, where appropriate infrastructure exists to accommodate these uses.

Several institutional uses including churches, schools, public lands and fire stations are also in the Township.

**The industrial base has had an incredible burst.**



An interesting feature in the Township is the presence of large utility rights-of-way, which make distinct boundaries between various land uses. Oftentimes, such rights-of-way can serve dual roles as utility corridors and as public pathways that link non-vehicular traffic routes in a community. This is a strong possibility for Zeeland Township too, especially since there are already significant efforts to develop bike paths separated from busy vehicle travel routes. Interestingly, the right-of-way corridors either pass through or border several pieces of public land.










**Insert Existing Land Use Map**



## Community Character

During community interviews and public forums, citizens repeatedly expressed a concern about how development would impact the nature of the Township. Most participants in the planning process recognized that development was coming; whether they welcomed it or shunned it. What was of more concern was how it would change “the quiet country side” or their “lovely view.” Citizens talked about open fields, viewing wildlife and “breathing room” vs. what they noted is often left behind in the “city”—congestion, traffic, and subdivisions. Perhaps the biggest challenge for Zeeland Township is balancing inevitable growth with this strong desire to preserve rural character. On a positive note, with careful design considerations, these seemingly competing interests can coexist. The key is well designed development which considers and incorporates elements of a quiet rural lifestyle.

Rather than discussing the finer points of good community design, it is sometimes easier to; 1) recognize what makes an area lose its rural character, and 2) identify what elements of rural character can be kept when development occurs. On the following two pages are simple visual presentations of a more developed landscape and a more rural landscape. The key differences between the two scenarios (other than buildings) include:

-  Dominant presence of motor vehicles and pavement.
-  A lack of buffering between structures and roadways.
-  An absence of usable open space in close proximity to development that can be accessed on foot (without trespassing).
-  A level of uniformity that makes one community look much like another.
-  Starkness in man-made features that can isolate people from their environment.
-  A design pattern which isolates individuals to their property (or puts them on the road) rather than having nonmotorized paths that connect properties and developments.
-  The removal (or absence of) natural features like vegetated fence rows, thickets, mature trees, and unmown fields.





Suburban character is starting to emerge.





Rural character  
may be  
overpowered  
without  
appropriate  
measures.





Another important aspect of Zeeland Township's character is the historic settlements of Beaverdam, Vriesland and Drenthe. Thoughtfully designed, small-scale, mixed use developments would complement these historic settlements.



**Historic features are an important part of rural character.**





**Public Services**

The Township population has not yet reached a size that would necessitate the community having its own police department or full-time fire department. Police protection has been increased, through a contract with the County Sheriff’s department. One police cruiser is dedicated to the Township in addition to the other resources available from the County Sheriff’s office. Three fire stations, staffed by volunteers, are located within the Township; in the settlements of Drenthe, Vriesland, and Beaverdam.

During the information gathering portion of the Master Planning process, citizens and officials noted they were very comfortable with the current level of police and fire service.



Zeeland Township has several recreational gems in the community. Drenthe Park has a lovely setting that includes picnicking facilities, ball fields, and modern play equipment. Van Zoeren Woods is nearly 35 acres in Section 11 and has some of the oldest timber stands in the Township. As mentioned earlier, large holdings of natural areas along the floodplain of the Macatawa River have recently been acquired by the County Park system and will not only protect the natural area for future generations but will also help protect the natural storm water control capacity of the system.





Public water and sewer are available in certain sections of the Township. Because of disposal issues in Drenthe and Vriesland, sewer lines are extended east down Adams Street from Holland Township, up 64<sup>th</sup> Street to Byron Road and back. This alone has prompted the development of several subdivisions. Water service from the east is provided through the City of Wyoming system. Water service from the west is provided by Holland Township. The Township can expect additional development pressure where public water and sewer systems are available.

## **Indicators of Change**

### Population

The most obvious change in the profile of Zeeland Township is its population growth. As indicated in Chapter 2, in just 10 years between the 1990 and 2000 Census; the Township population increased by 70% or 3,141 individuals. For comparative purposes, the county population grew by 30% and the state population grew 6.9% during that same period.

### Building Activity

With the population increase came a boom in development. Between 1993 and 2003 alone, a total of 1,026 new housing units were constructed in the Township, which equates to about 93 units per year. The majority of these housing units were single family homes (85% of all new housing units) but condominium development is also emerging as a strong market segment, representing 15% of all new housing units. See Table 4-1.

It is noteworthy that nearly one-third of all housing units in the Township are “mobile” homes, according to the 2000 Census. Between 1990 and 2000 the number of “mobile” homes in the Township increased by 309 units. While the 2000 Census used the term “mobile home,” manufactured housing is a more appropriate term. There are currently three manufactured home parks in the Township which provide ample opportunities for that form of housing. Multi-family or condominium housing, however, accounts for a much smaller percentage of the housing stock (about 4%). While large apartment complexes are more well suited in urbanized areas that are near regional commercial facilities, small scale multi-family development could be well suited adjacent to the City of Zeeland and Holland Township. Accessory apartments over storefronts are also anticipated to be an element of mixed use development in the village settlement areas.

The 2020 population projection for the Township is 16,738 people. If the average household size remains at about 3 persons per household, this would be an additional 3,041 households in the Township since the 2000 Census, an average of 152 units per year (62% more than the current average). For discussion purposes, if each household consumed an average of 2 acres of land per home site, that would equate to about 6,100 acres of land consumed in a 20-year timeframe, that equals 9.5 sections of land.



Table 4-1

Building Permits Issued, 1993 – 2003 Zeeland Township, Michigan			
Permits Issued Per Year By Residential Unit Type			
Year	Condominium	Single Family	Total
1993	20	53	73
1994	32	53	85
1995	0	46	46
1996	0	79	79
1997	8	70	78
1998	10	61	71
1999	15	96	111
2000	14	106	120
2001	8	95	103
2002	14	92	106
2003	40	114	154
<b>Total Issued:</b>	<b>161</b>	<b>865</b>	<b>1026</b>
<b>11- year average:</b>	<b>14</b>	<b>79</b>	<b>93</b>

Source: Zeeland Township

Land Valuation

Over the past 20 years (1984-2004) the Township has experienced a large amount of development, with the most significant changes between 1994 and 2004. This is also reflected in the Township’s state equalized value figures (SEV). For example, in 1984, the SEV for all industrial facilities in the Township was just under \$400,000. Just 20 years later (in 2004), industrial facilities in the Township were valued at nearly 32 million, *80 times* what they were in 1984. The value of commercial properties also grew by staggering proportions. In 1984 commercial properties were valued just short of two million dollars. In 2004 the value of commercial properties leapt to nearly 46 million dollars, or *23 times* what they were in 1984. In that same time period, residential SEV increased by 10-fold and agricultural SEV increased three-fold. While the value of agricultural lands still increased significantly, they did so at a much lower level than other classifications and overall. The Agricultural segment has become a much smaller percentage of the overall Township SEV. This is the case, in part, because less land is in agricultural use as it gets consumed for development.

The shift of the Township from a primarily agricultural community to a developing community is also exemplified by the fact that in 1984, agricultural SEV represented about 45% of total SEV. By 2004 it accounted for about 16% of the Township's total SEV; see Table 4-2 and Figure 4-1 and 4-2 following.

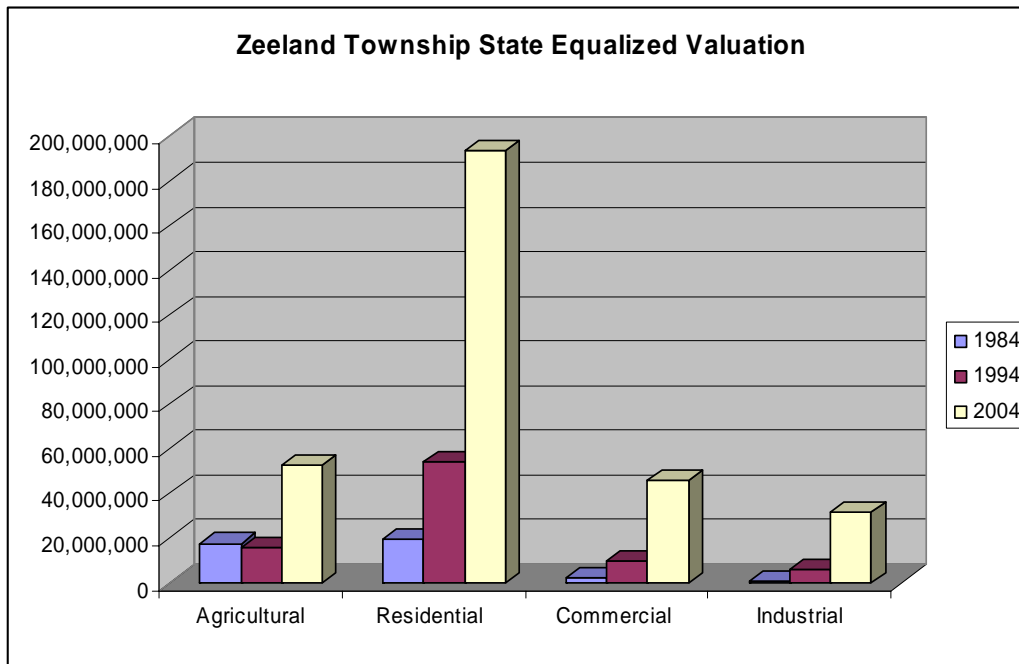


**Table 4-2: State Equalized Value**

Year	Agricultural	Residential	Commercial	Industrial	Total
<b>1984</b>	17,513,750	19,470,800	1,846,600	398,200	39,229,350
<b>1994</b>	15,438,200	53,945,750	9,844,200	5,979,800	85,207,950
<b>2004</b>	52,652,800	193,138,319	45,985,600	31,506,100	323,282,819

Source: State Tax Commission

**Figure 4-1**



Land Fragmentation

The size of a parcel influences its economic viability for various uses. For example, in order for a parcel to be economically viable for agricultural use, it generally has to be at least 40 acres in size. Higher value crops like fruits and vegetables, however, may be economically viable on 10-20 acre parcels.

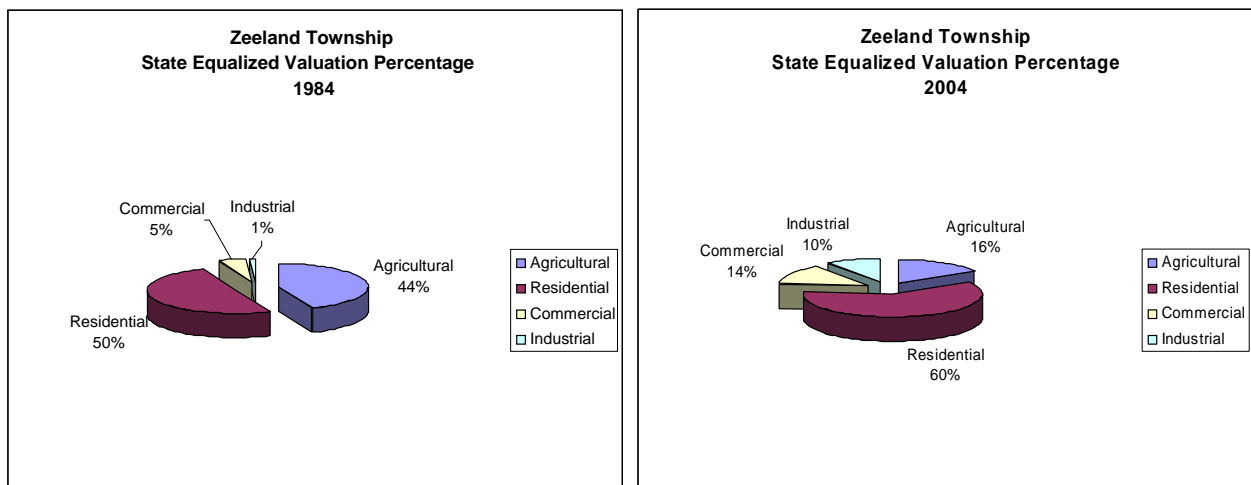
In developing areas, if a 40 acre parcel of land is divided into smaller pieces it will likely be sold to separate owners for large-lot residential or subdivision development. This process of land division to smaller and smaller parcels is called fragmentation. It is best depicted by historic plat maps; see the following pages for 1930, 1965, 1984, and 2004 plat maps. Note how the 1930 plat map is dominated by large parcels (i.e., 40-80+ acres). In fact, it is difficult to locate a parcel less than 40-acres in size. The 1965 plat map shows some land divisions into smaller parcels, particularly close to the City of



Zeeland, but the bulk of the Township is still in large parcels. It is interesting to note that many of the family names from the 1930s remained over three decades later.

By 1984 the Township had changed profoundly, most notably by the addition of I-196, and the City of Zeeland annexations of portions of the Township. Subdivisions and parcels of 5-10 acres were emerging in several sections of the Township. By 2002 large parcels were in the minority and the pattern of land divisions suggested a landscape dominated by large lot residential development in much of the Township. More intense land uses like condominium developments and mobile home parks have also been established, suggesting a level of development pressure that will affect the Township for years to come.

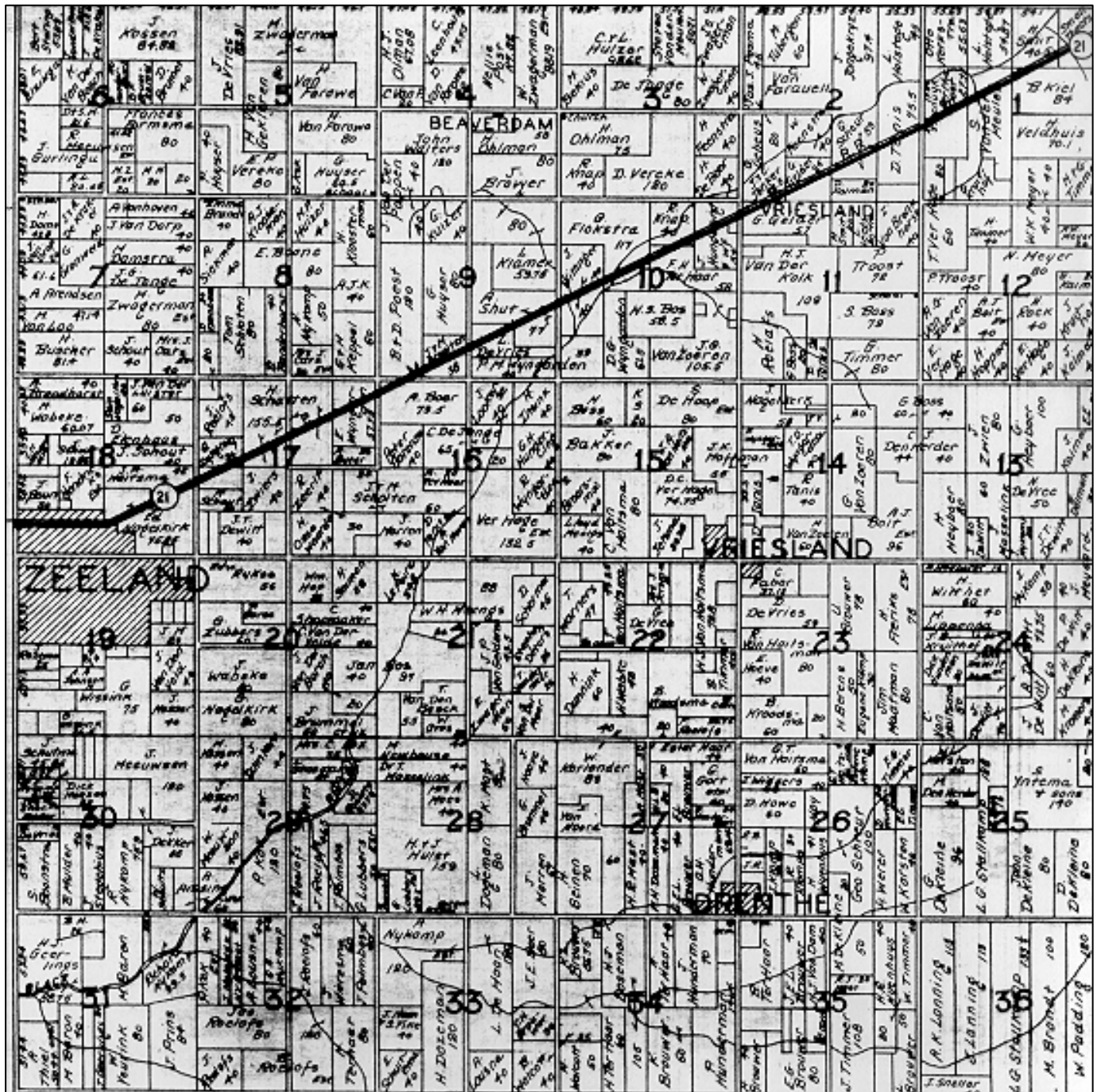
**Figure 4-2**







1930 Plat Map

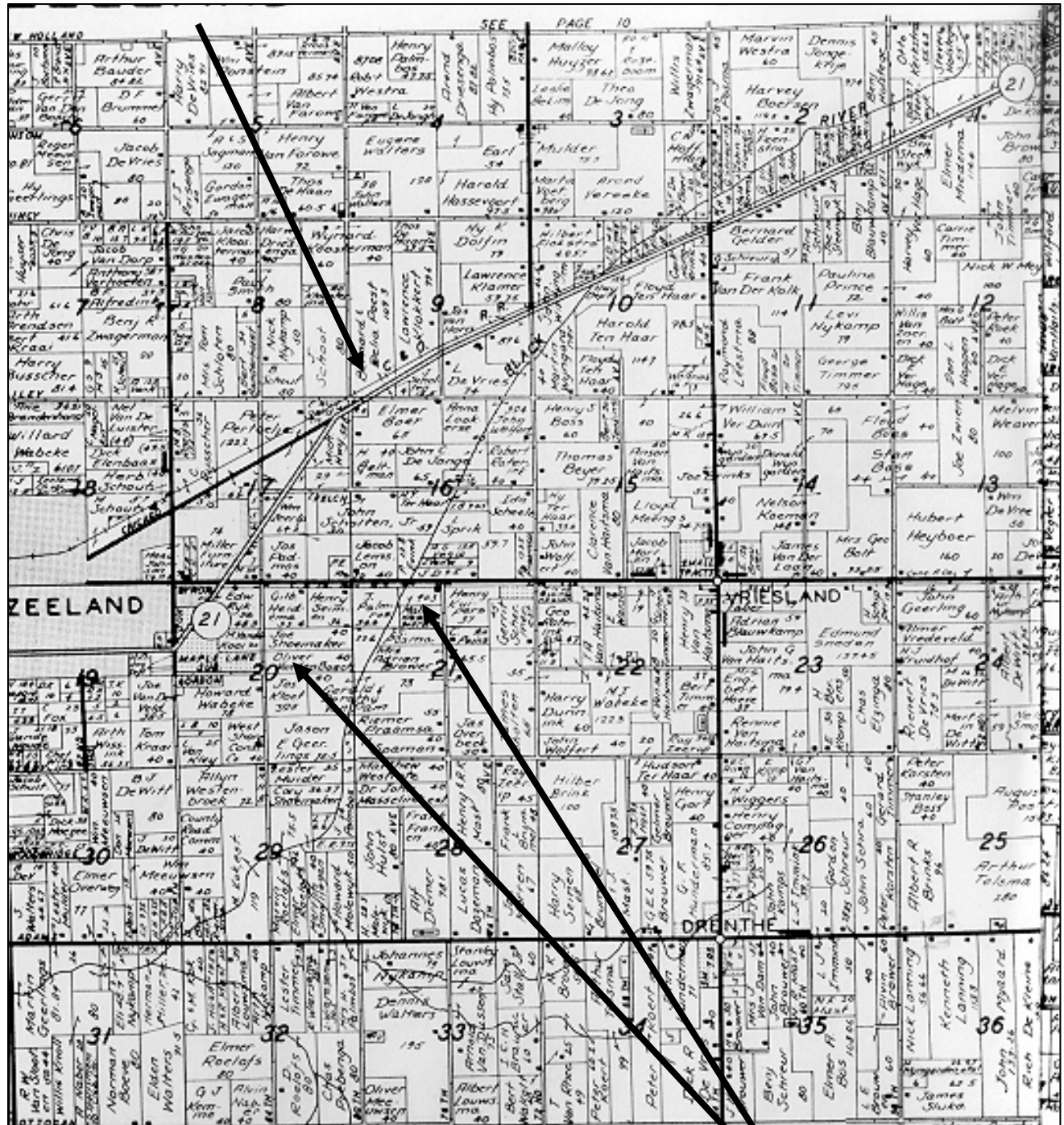


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1965 Plat Map

Relocated M-21



Parcel splits occurring near the City.

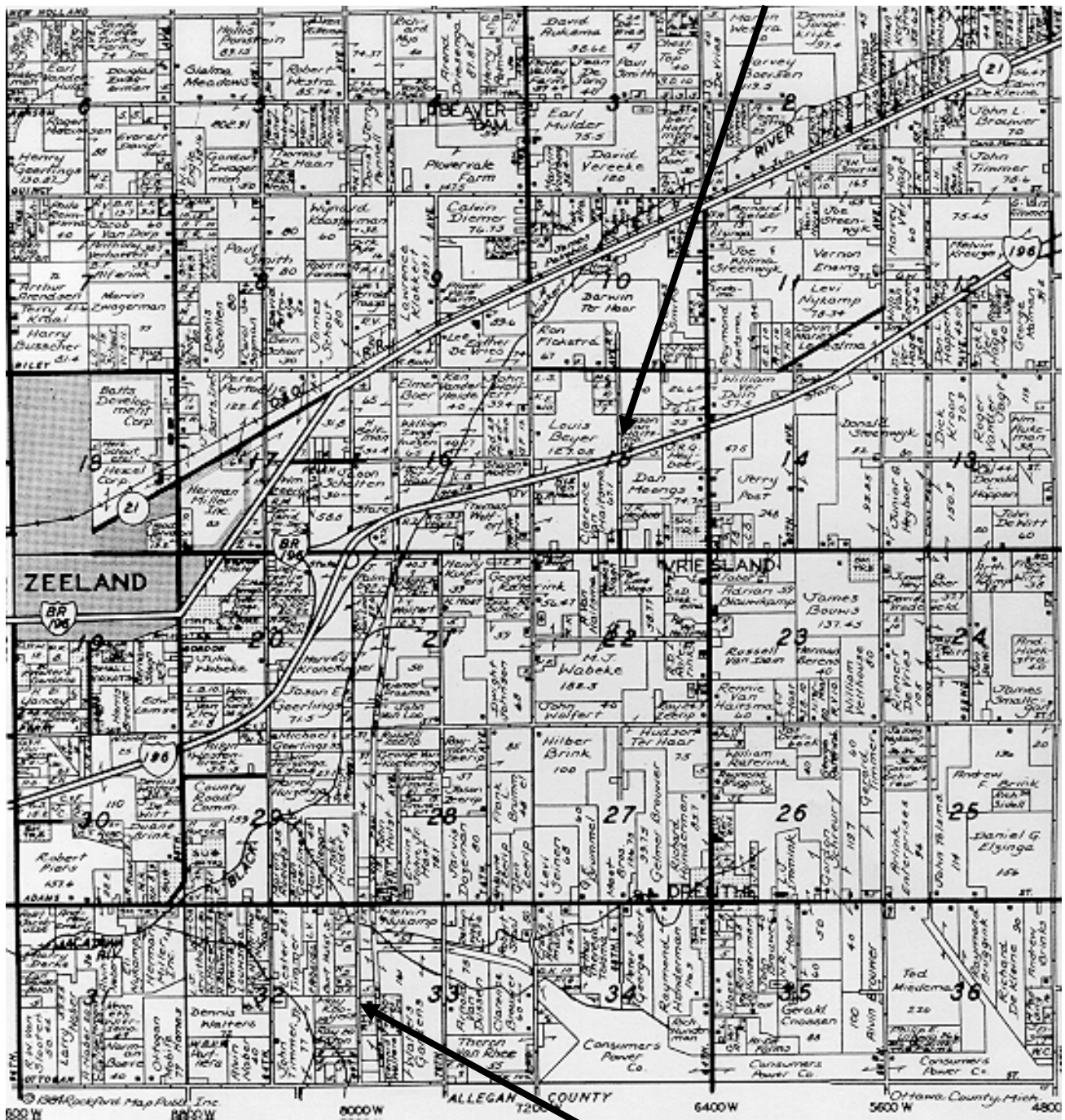
Reproduced with permission from Rockford Map Publishing

Note: 1960 population; 2,655



1984 Plat Map

I-196 constructed



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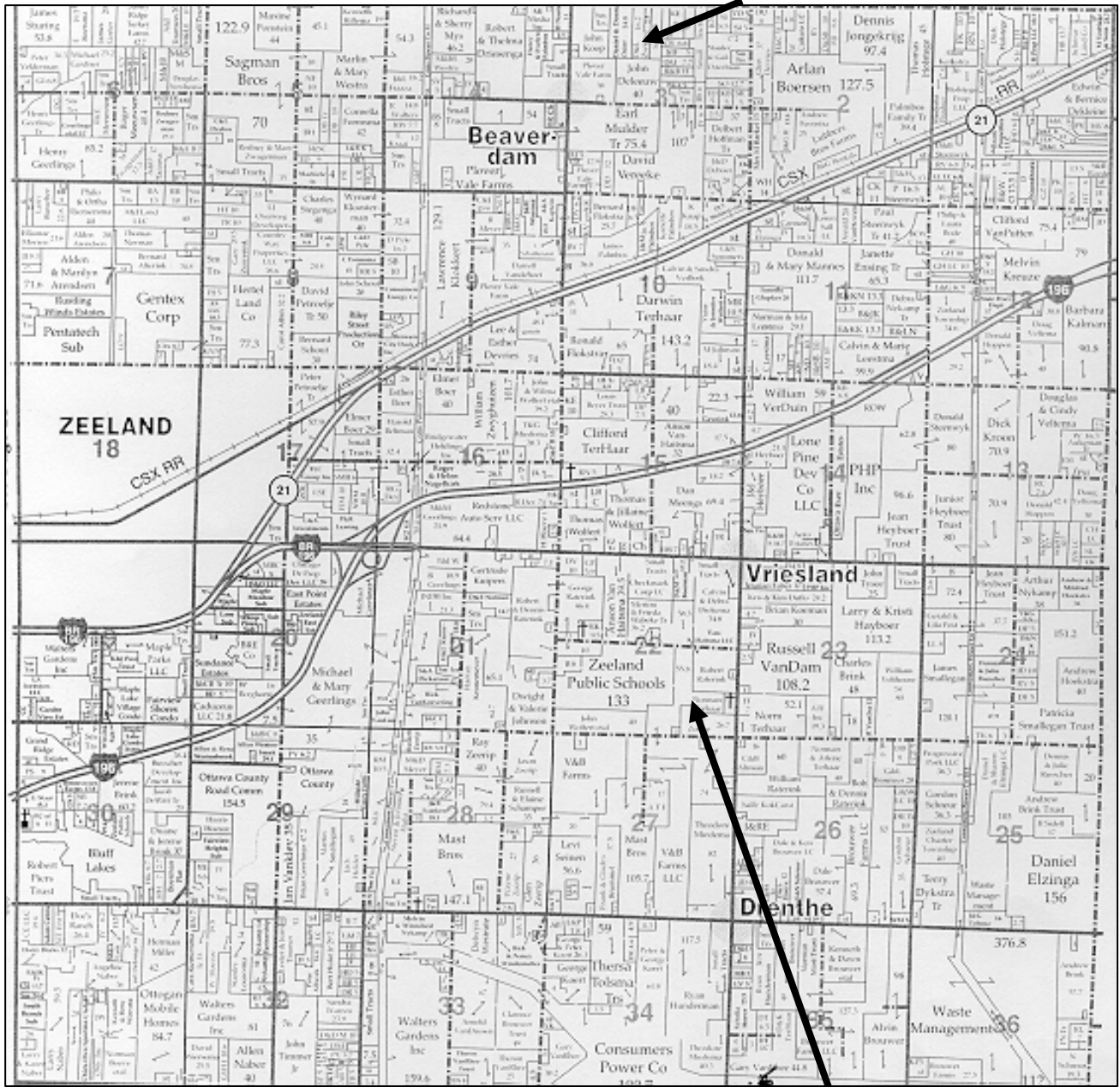
Additional parcel splits.

Note: 1980 population; 3,711



2002 Plat Map

Additional parcel splits further out.





Reproduced with permission from Rockford Map Publishing


Subdivisions emerging that are not adjacent to the City.





## Summary


- 


The amount of commercial, industrial, and residential development in the Township between 1984 and 2004 was staggering. For example, changes in state equalized values (SEV) for commercial and industrial properties increased 40 and 80 *times*, respectively.
- 


Between 1993 and 2003 an average of 93 new housing units were constructed in the Township each year.
- 


Although agricultural uses account for about 60% of the land in the Township, the value of those lands in relation to the total SEV of the Township went from 45% in 1984 to 16% of the total SEV in 2004.
- 

The expansion of farming operations over the long term is unlikely because of land values. The exception to this trend may be in the areas of unique muck soils that are highly productive and have severe limitations for development.
- 

Large parcels of land are being subdivided or fragmented into smaller pieces which will continue as development pressure increases in the Township. Although many of these areas are currently undeveloped, it appears that property owners are posturing to sell their land for residential development.
- 

With water and sewer service expanding in the Township, development pressure is likely to increase significantly west of 64th Avenue.
- 

Many portions of the Township are becoming more suburban than rural in nature. Realistically, with the development pressure the Township is experiencing, the primary challenge will be to protect the historic and rural character of the community as development occurs.
- 

To date, the level of public safety services are deemed adequate in the Township. As the population grows, however, additional public services will likely have to be provided.
- 

Several holdings of public lands in the Township will help serve the future population base. Additionally, nonmotorized trails can be augmented to link these amenities.



## Chapter 5 ~ Transportation Analysis ~

### Regional Highway Network

As indicated previously, Zeeland Township is linked to the regional area and state by a well-defined system of state and federal highways, including I-196 and Chicago Drive (M-21). I-196, an east/west interstate route, connects Zeeland Township with Grand Rapids and urban centers along Michigan's west coast via U.S. 31/I-196. M-21 offers direct connection to the City of Zeeland and City of Holland on the west and to the Grand Rapids metro area on the east. Route 6 helps alleviate through traffic in the Township, from travelers wanting destinations south of Grand Rapids, because I-196 was not a convenient route. Another proposed by-pass on I-196 would create a highway connection to Grand Haven and other points north, but it is not anticipated in even the next 10 years. The existing highway connections provide quick and convenient access to Grand Rapids and Michigan's west coast and are particularly important to the Township's industrial and retail development.

For many years, M-21 has served as a primary thoroughfare through the Township. Known locally as Chicago Drive, the route east of 84<sup>th</sup> Avenue carried an average of approximately 4,092 vehicles per day through the Township in 1995 increasing to 5,338 vehicles per day in 2003 (an increase of 1,246 vehicles per day).

While these corridors have prompted development in the Township they have also isolated various portions of the Township. North/south connections are limited by crossing points over M-21, I-196, and the CSX railroad corridor which runs adjacent to M-21. Travelers can cross the corridors at 96<sup>th</sup> Avenues, but must contend with the in-town traffic of the Cities of Zeeland and Holland. The crossing at 88<sup>th</sup> is also becoming more congested as development densities increase adjacent to the City of Zeeland. The next crossing east is 64<sup>th</sup> Avenue, which goes through the settlements of Drenthe and Vriesland. The eastern most boundary of the Township, 48<sup>th</sup> Avenue is the only other point where I-196, the CSX railroad corridor and M-21 can be crossed. Another limiting factor for travel or road development includes the fact that the traditional grid of roads is interrupted by wetlands and muck farms—expansive low-lying areas that do not support the development of structures or roads without significant excavation and filling. For example, at the shared Allegan/Ottawa County boundary line about 2.5 miles of the boundary has no road and much of sections 1, 2, 20 and 21 have limited roads due to muck soils and the Macatawa floodplain.

Another important transportation trend in the Township has been the lack of use of I-196 for travelers (including significant truck traffic) coming from the southern Grand Rapids metro area. Because both I-196 and M-21 run diagonally northeast to southwest in the Township, it is inefficient to use if someone is traveling from many parts of Wyoming or Byron Center. Thus Adams and Byron Roads have become significant direct east/west corridors through the Township. However, as indicated previously, M-6 has provided significant reduction in this traffic.



## **Township Street System**

The street network is the principal transportation system and serves primarily automobile and truck traffic, with bicycle and pedestrian paths included along certain portions of roadways within the Township. The emphasis in the motorized vehicle system is to operate as safely and efficiently as possible.

The street system is defined by a Street Functional Classification which was developed by the American Association of State and Highway Transportation Officials (AASHTO). The hierarchy of streets ranges from local streets to collector streets, to arterials and highways. For Zeeland's classifications, see Base Map, page 50. These functional classes establish a common understanding of the use of the street and its character which in turn dictates design and access standards from adjacent properties. This system also helps determine how the costs of new street construction are shared between the Township and surrounding properties.

The Township's street system is composed of a typical "grid pattern" layout. In a grid pattern, minor roads run perpendicular to the major roadways (e.g., 84<sup>th</sup> Avenue to Adams Street), which are set at right angles to one another and are more-or-less evenly spaced. This street pattern typifies the time period of when the Township was originally established. Different street pattern characteristics can be found in some of the Township's newer developed areas which include curvilinear systems, emphasizing cul-de-sacs and/or uneven spacing. As previously mentioned, M-21, the CSX rail line, and I-196 interrupt this grid on north/south routes and pose a crossing challenge to travelers and wildlife alike.

The capacity and function of a roadway impacts land use demand and, in turn, changing demand in land use patterns can necessitate improvements to roadways. For example, a gravel road traditionally used only for farm traffic which begins to get residential development on it will eventually deteriorate to a "washboard" road that no amount of grading can rectify. Once density reaches a certain level there is often a demand to pave the road. When the road is paved, the demand for home sites increases because of nicer travel conditions. As traffic volumes increase, roads widen, speed limits increase, turn lanes are provided, shoulders are widened and additional lanes may be added.





This cycle of road development can sometimes become a vicious cycle which can tax limited community resources. Because the timing and nature of road improvements has significant impact on land use, public safety, and quality of life, they should be carefully scrutinized and designed.




### **Roadway Classification**

The Federal Highway Administration (FHWA) developed a system of classifying all streets, roads and highways according to their function. National Functional Classification (NFC) is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Basic to this process is the recognition that most travel involves movement through a network of roads. The Michigan Department of Transportation (MDOT) and Ottawa County Road Commission (OCRC) applies this concept and identification system for roadways within the state of Michigan.

The arterial highways generally provide direct service for travel involving longer trips and emphasize a high level of mobility for through movement. The collector roads serve small towns directly, connects them to the arterial network, and collects traffic from local roads, which serves individual farms and other rural land uses.

### **AREA DEFINITION**

The FHWA provides for separate classification of urban and rural functional systems, since they have different characteristics regarding density and types of land use, density of street and highway networks, and nature of travel patterns. Specifically, the FHWA uses the following terminology when classifying urban and rural areas:

-  Small urban areas are those urban places, as designated by the Bureau of the Census having a population of five thousand (5,000) or more and not within any urbanized area.
-  Urbanized areas are designated as such by the Bureau of the Census.
-  Rural areas comprise the areas outside the boundaries of small urban and urbanized areas, as defined above.

The FHWA provides separate descriptions of the characteristics of the basic functional systems and their subsystems for rural areas, urbanized areas, and small urban areas.

### **Functional Systems for Rural Areas**

Rural roads consist of those facilities that are outside of small urban and urbanized areas, as previously defined. They are classified into four major systems: Principal arterials, minor arterial roads, major and minor collector roads, and local roads.

### **Principal arterial system**

The principal arterial system should carry the major portion of trips entering and leaving





the area, as well as the majority of through movements desiring to bypass the Township. This system should provide continuity for all rural arterials which intercept the urban boundary.

The principal arterial system in Zeeland Township includes the following two subsystems:

*Interstate System.*--The Interstate System consists of all presently designated routes of the Interstate System

Example: I-196

*Other principal arterials.*--This system consists of all non-Interstate principal arterials; including any state routes between large cities; important surface streets in large cities

Example: Byron Road

### **Minor arterial road system**

The rural minor arterial road system should, in conjunction with the principal arterial system, form a rural network having the following characteristics:

1. Link the Township with larger towns that are capable of attracting travel over similarly long distances and form an integrated network providing interstate and intercounty service.
2. Be spaced at such intervals so that all developed areas of the Township are within a reasonable distance of an arterial highway.
3. Be designed to provide for relatively high overall travel speeds with minimum interference to-through movement.

The minor arterial street system should interconnect with the urban principal arterial system and provide service to trips of moderate length at a somewhat lower level of travel mobility than principal arterials. Such facilities may carry local bus routes and provide intra-community continuity, but ideally should not penetrate identifiable neighborhoods.

Example: 96<sup>th</sup> Avenue

### **Collector road system**

The rural collector routes generally serve intracounty travel and constitute those routes on which travel distances are shorter than on arterial routes. Consequently, more moderate speeds may be typical. The collector street system collects traffic from local streets in residential neighborhoods and channels it into the arterial system.

In order to define more clearly the characteristics of rural collectors, the collector road system is subclassified according to the following criteria:



*Major collector roads.*--These routes provide service to any county seat not on an arterial route to the larger towns not directly served by the arterial roads, and to other traffic generators of equivalent intracounty importance, such as schools and parks; link these places with nearby larger towns or cities, or with routes of higher classification; and serve the more important intracounty travel corridors.

Example: Chicago Drive, 64<sup>th</sup> Avenue, Adams Street

*Minor collector roads.*--These routes have the following characteristics: (1) Spaced at intervals to collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road; (2) provide service to the remaining smaller communities; and (3) link locally important traffic generators with their rural character. The OCRC does not classify any roads in the Township as minor collectors.

### **Local road system**

The rural local road system primarily provides access to adjacent land; and provides service to travel over relatively short distances. The local street system offers the lowest level of mobility and usually contains no bus routes. Service to through, traffic movement usually is deliberately discouraged. Types of streets include residential streets and lightly-traveled county roads.

Example: Ottogon Road, Perry Road, Riley Road, Quincy Road, 56<sup>th</sup> Street, 84<sup>th</sup> Street, 88<sup>th</sup> Street

Arterial streets are characterized by two to four lanes. Center left-turn lanes are often found at high volume intersections, and in heavily trafficked business locations where businesses have frontage on the street. Traffic control measures may include caution lights and/or full traffic lights, turning lanes and deceleration lanes.

Chicago Drive (M-21) operates as the primary major arterial street within the Township. Coupled with railroad tracks that run parallel with Chicago Drive along the north side, the road has created a clear physical separation within the Township. Methods to connect the Township between the north and south sides of Chicago Drive need to be considered. This consideration should include non-motorized ties.

In addition to automobile traffic, each of the above referenced major arterial streets has historically carried commercial truck traffic and continues to carry it. For homes that have sited directly along these streets, quality of life can be diminished when traffic, noise and fumes increase. Concerted efforts should be made to limit driveway points, provide ample setbacks, buffering and other design techniques that prevent negative impacts for residents and travelers.

Adams Street is a two-lane system largely characterized by adjacent residential home sites, as well as commercial and industrial uses. This is somewhat typical



of minor and major arterial streets in the Township. Byron Road runs parallel to I-196 between 48<sup>th</sup> Avenue and its intersection with the interstate.

Both Adams and Byron Roads have carried significant truck traffic traveling through the Township from the southern Grand Rapids metro area to points in Holland and Zeeland and also to the sanitary landfill in section 36 of the Township. These routes are also used by commuters from southern metro area locations to employment centers in and around Holland and the City of Zeeland, because I-196 is not convenient. While there has been some immediate relief from M-6 regarding truck traffic, the rate of development in the area will significantly increase vehicle traffic.



**Byron Road east of I-196 Interchange**



**Chicago Drive and Byron Road intersection**





**Insert Road Classification Map**





## Traffic Counts


With some regularity, the County Road Commission collects 24-hour traffic counts of various road segments in the Township. The counts are an average vehicle count of both lanes of traffic on that road segment. The Traffic Count Map on the following page summarizes significant traffic counts in the Township. Note that the range of years for which data is presented may change due to the timing of counts. What the map is depicting is general trends in traffic patterns. Note that some areas which experienced a drop in traffic counts over time have generally had some road construction in the vicinity which has caused decreases in traffic. Following are highpoints of the traffic count data:

- 


State traffic count data reflects that from 1992 to 2002 the traffic volumes of M-21 have stayed about the same, averaging about 20,000 vehicle trips per day.
- 


I-196 traffic counts have increased about 56% between 1992 and 2002, going from about 17,000 vehicle trips per day to about 26,500 vehicle trips per day.
- 

The road with the highest traffic count was Byron Road, just east of the off-ramp off I-196. The 2003 count was about 8,700 vehicle trips per day.
- 

The roadway with the greatest increase of traffic since 1995 is 88<sup>th</sup> Avenue, north of Adams Street which experienced an additional 3,612 vehicles per day between 1994 and 2003. This 225% increase is not surprising due to the level of development activity in that area in the last couple of decades.
- 

The road with the most significant impact overall was 64<sup>th</sup> Avenue, which experienced the following in about 2 decades:

  - south of Chicago Drive + **93%** between 1994-2003.
  - south of Byron Road + **76%** between 1994-2003.
  - north of Byron Road + **67%** between 1994-2003.
  - north of Adams Road + **76%** between 1994-2003.
  - south of Adams Road + **51%** between 1994-2003.
- 

Adams Road had an increase in traffic counts east of 64<sup>th</sup> Avenue of about **9%**, west of the intersection the counts averaged right around 4,400 vehicles per day.
- 

Still in the vicinity of 64<sup>th</sup> Avenue; Byron Road had a traffic count increase of **31%** (west of 64<sup>th</sup>) and a **38%** increase (east of 64<sup>th</sup>).

## Traffic Accidents

The intersection of I-196 and 88<sup>th</sup> Avenue is the location of the majority of traffic accidents in the Township (12 total in 2003). Byron Road and Chicago Drive represents



the second greatest accident area with seven crashes total in 2003. Other high vehicle accident areas according to the 2003 Zeeland Township Traffic Crash Report include I-196 and Byron Road (6 total), and Chicago Drive and 72<sup>nd</sup> Avenue (5 total).

### **Roadway Capital Improvements**

While the County Road Commission is responsible for the public road system, the Township uses its funds to make road improvements. The Township has progressively instituted local road system improvements with the paving of local streets. The Township has recently resurfaced roadways and continues to improve certain roads, including 80<sup>th</sup> Avenue and Adams Street. The Capital Improvement Program calls for additional street improvements. A road millage is used to make upgrades to roads within the Township. The goal of the Township's Road Committee historically has been to pave one mile of road each year and to pave highest traffic, through routes first. As stated previously, with the improvement of a road often comes increased usage, increased speed and increased development pressure so the Township may want to delay road improvements to those areas where it wants to keep development densities low.

Preparing a road to pave is a two-step process. Step one includes ditch work, establishing road alignment, and road widening. After a road has been in place through a winter season, the road is regraded, leveled, then asphalt is applied. Historically, the road improvement schedule has been ambitious. The Road Committee works on a 2–5 year idea of upcoming projects and meets annually to make recommendations regarding roadway construction priority projects. The design and planning steps of the road improvement process should include consideration of safe nonmotorized travel.



**Jogger along Ottogan Street**

### **Non-motorized Systems**

Zeeland Township features a system of sidewalks and non-motorized pathways located adjacent to 88<sup>th</sup> Avenue, and Adams Street between 80<sup>th</sup> Avenue and 96<sup>th</sup> Avenue. The detached pathway along Adams Street extends west to existing sidewalks at the Holland City limits and will eventually connect to an existing bike path on 104<sup>th</sup> Avenue. A deck is currently under construction along some wetland portions of the pathway. The path along 88<sup>th</sup> Avenue includes an attached and detached paved sidewalk on one side of the street. These are wonderful amenities for residents, the design of which should be promoted throughout the Township. Extensive utility rights-



**Pathway on 88<sup>th</sup> Avenue**



of-way may also provide an opportunity for nonmotorized trail connections throughout the Township which are isolated from roadways (see again the Existing Land Use Map on page 29).

Generally, the vast majority of the Township’s roadways do not feature sidewalks or off-street paths. Chicago Drive, Byron Road and 96<sup>th</sup> Avenue contain a paved shoulder area. Further, speed limits along roadways that offer paved shoulders or detached paved paths have not been reduced to below 50 mph, such as the portion along 88<sup>th</sup> Avenue and Adams Street between 80<sup>th</sup> Avenue and 96<sup>th</sup> Street. Other primary roadways within the Township do not offer a physical or marked separation from vehicles. Some of the Township’s newer neighborhoods possess sidewalks that are internal to the development, while many older subdivisions and most newer commercial and industrial developments do not contain such improvements. Having motorized and nonmotorized linkages between developments is also a critical component of good community design.



Sidewalks and off-street paths that contain enhanced crossings, overpasses and underpasses provide safe connections and the opportunity for pedestrian and bike travel throughout the Township. Connections to existing sidewalks and paths provide a continuous network so that pedestrians are not stranded short of their destination or forced into difficult or potentially dangerous situations.



Macatawa River Greenway

The Macatawa Greenway Partnership has developed a master plan for the Upper Macatawa Conservation Area. In Zeeland Township, the Conservation Area includes the Macatawa River south and east of I-196 to Adams Street. The Area also extends east in segments to 74<sup>th</sup> Avenue and west to 88<sup>th</sup> Avenue south of Frontage Road.

Eventual plans for this greenway park/conservation area will include the Macatawa River Greenway Trail, a hard surface multi-use trail that will connect to a regional trail network. In an effort to support this plan, the Township included an under bridge path as part of the bridge construction on Adams Street at 88<sup>th</sup> Avenue.

**Public Transit Operations**

While public transit service does not currently serve the Township area, transit service is available within the City of Zeeland via the Macatawa Area Express (MAX). The MAX









service operation is limited to demand-response service within the City Zeeland; no other public transit service is current or planned within remaining areas within Zeeland Township. However, with increased population base and rising costs of single car commuting, there may be opportunity to use alternative transportation by expanding MAX service.

### **Rail Network**

Rail operations currently occur along the CSX Railway line. This line runs parallel to Chicago Drive (M-21) on the north side within the Township, and continues along Washington Street within the City of Zeeland. Rail services that utilize this line include Amtrak and CSX. Amtrak provides daily service between Grand Rapids and Chicago, with one westbound trip in the morning and one eastbound trip in the afternoon. Trains that utilize the railway for freight service occur 20-24 times per day, operating as a short line and regional route within western Michigan. Rail crossings are maintained at 48<sup>th</sup> Avenue, 64<sup>th</sup> Avenue, 72<sup>nd</sup> Avenue, 76<sup>th</sup> Avenue and 80<sup>th</sup> Avenue, as well as multiple points in the City of Zeeland. While rail use in the Township does not tend to service Township residents directly, it may in the future play a much larger role. For example, some daily rail service between Grand Rapids and the Holland metro area could make economic sense, with a rail stop and shuttle parking being needed in the Township.

### **Summary**

-  Premature road improvements can inadvertently increase development pressure in inappropriate areas.
-  The Township north/south transportation system is limited by I-196, M-21 and the CSX railroad line which traverses the community.
-  Large areas of natural wetland and muck areas are not serviced by roads which naturally limit development potential.
-  Nonmotorized trails are becoming more important to the community. Significant utility rights-of-way both limit development and provide opportunities for nonmotorized trail connections throughout the Township.
-  Public and rail transit may play a much more important local role as population densities increase in the area.
-  In the future, several transportation challenges will need to be addressed as the Township grows including:
  - Corridor capacity and accessibility problems along Chicago Drive.
  - System-wide arterial street capacity along Byron Road.
  - Capacity improvements (turn lanes, traffic signals, etc.) at intersections along heavily traveled routes.
  - Improved interconnected street network within the existing transportation system.





- Upgrading railroad crossings to improve safety and provide relief from train delays at the Chicago Drive and 64<sup>th</sup> Avenue and 72<sup>nd</sup> Avenue crossings.
- Need for MAX system extensions within the Township.



## Chapter 6

### ~ Goals and Future Development Concepts ~

A Master Plan does not “predict” the future. Any expectation that this Plan will accurately anticipate what might occur in even the next 5 years should be quickly dismissed. As new residents, including new Planning Commissioners and Township Board members, arrive on the scene attitudes about growth, Township character, and other Plan elements may change. Even one new major development could drastically alter the Township’s future.

Instead, the Plan, once adopted, is intended to set a *direction* for the Township to follow in the period it covers. That direction has many branches and possibilities. The Plan, used properly, will guide the Township through decisions about land use, public services, and a host of other issues. But, the Plan has to remain flexible, to take into account those changing circumstances that no one can predict.

The great French Marshall, Lyautey once asked his gardener to plant a tree. The gardener objected that the tree was slow growing and would not reach maturity for 100 years.

The Marshall replied, *'In that case, there is no time to lose; plant it this afternoon!'*

The following Vision, Goals and Objectives are intended to provide a policy roadmap against which decision makers can weigh their decisions. Land use decisions that conflict with, or reverse the Vision, Goals and Objectives cannot be taken lightly. Even in the period of time following the adoption of the Plan, changes may occur which were not necessarily expected. However, the directions set by the Township should remain valid.

Establishing realistic and meaningful community Vision which is supported by Goals and Objectives is essential to effective Master Plan implementation.

**A VISION** is the desired image of a community as seen through the collective eyes of its citizens.

**A GOAL** is a destination, a final purpose which a community seeks to attain its vision. A goal should be a broad general statement.

**An OBJECTIVE** is a means to accomplish the Goal. It may be very specific or detail a future action that should be undertaken.



Public meetings, community research, personal interviews, and previous plans provided a general frame of reference from which the following Vision, Goals and Objectives were developed. More basic than the Goal and Objectives of this plan is the following community Vision statement. This statement is meant to provide a common frame of reference from which decisions are made, from validating Goals and Objectives to evaluating individual projects and land use requests.

**COMMUNITY VISION:**

*Because growth is thoughtfully considered and each development meets Township site and building design standards a level of quality emerges that keeps neighborhood and business areas attractive and healthy for decades to come. Amenities like nonmotorized trails and open spaces are woven throughout the community regardless of the type of development (e.g., single-family subdivisions, condominiums, or commercial uses).*

*The rural feel of the community is retained in developments. The Township's natural features like topography and existing vegetation are incorporated into development rather than being eliminated by it. Every element of design considers rural character-- from having natural entry points in developments to the materials chosen for signs.*

*The Township will have an interconnected street system that helps keep any single street from being overburdened by excessive traffic. Major streets have ample setbacks to prevent encroachment upon the roadway; to retain elements of the natural landscape; and to permit trails along the corridor which allow residents and business patrons to safely travel from one property to another by bicycle or on foot. Connections are made between neighborhoods rather than permitting a series of dead-end cul-de-sacs which can inhibit service delivery and community interaction. The network of open spaces and trails ties neighborhoods together and connects them to recreational facilities and commercial areas. Walkers, bikers, and wildlife have opportunity to travel throughout the Township outside of a busy road system. Shoulder areas along roadways are also designed to safely share the right-of-way with cyclists and pedestrians.*

*Higher density residential development is located in areas either immediately adjacent to sewer service or near more urbanized areas. In the Township, the design of multi-family development will remain small scale. Large multi-family complexes are better suited for and accommodated in adjacent urban areas. Modular home communities are well maintained and remain close to urban areas where higher population densities have less impact on roads and services.*

*Intensive commercial and industrial development is limited within the confines of I-196, Riley Road and 76<sup>th</sup> Street. Highway commercial is limited to a small area near the Byron Road exit. Neighborhood commercial uses are more local in nature and are limited to portions of the southerly side of M-21-- recognizing the natural and made-made limitations to development north of M-21. Further, natural topography along portions of the southerly side of M-21 will limit the expansion of commercial and industrial uses.*



*In the historic settlement areas of Drenthe, Vriesland, and Beaverdam a few small-scale, well-designed mixed-uses provide local commercial and service needs for adjacent residents. Small scale apartments over storefronts and offices also emerge. Noteworthy historic structures within these settlements help set the tone for settlement design. Viable structures are adapted for service-oriented businesses like professional offices. Development within the settlements will respect the village-like concept in terms of their design, size, and placement.*

*Rural areas of the Township will keep the elements of community character such as privacy, open space, rural views, and natural amenities. Future development in these areas is low density and blends with the character of the natural environment rather than overpowering it. Those areas where sewer service cannot be economically provided will remain agricultural with some limited low density residential development. Floodplains remain free of development and serve their natural capacity as storm water management areas. Unique and valuable agricultural muck lands remain economically viable because they are accommodated in development design, and not overtaken by it. Housing densities will also be kept low around intensive livestock operations and adjacent to the landfill preventing use conflicts among land owners.*



## Specific Goals and Objectives

The following goals and objectives were developed based upon the community vision, input from citizens and local officials, and research and analysis of existing conditions.

**Goal: Protect viable farm operations, particularly valuable muck soils, from encroaching development.**

Objectives:

1. Explore financial tools to promote agricultural preservation.
2. Permit higher density residential developments only where public water and sewer services are available.
3. Due to excessive cost and topographic limitations, do not provide additional sewer or water service east of 64<sup>th</sup> Street which could promote premature development in those areas.
4. Allow low density, rural clustering in agricultural areas as a means for land owners to realize some income from less productive agricultural lands. On-site sewer systems, however, should be discouraged.
5. Consider a sliding scale agricultural district for those areas where development densities should be kept low. Limit the number of splits permitted based on the size of the parent parcel.
6. Engage in dialog and educational programs to help land owners in farming areas understand development options.
7. Investigate the potential of noncontiguous Planned Unit Developments as a means to conserve viable farmland. Should this tool be employed, identify target areas for protection.
8. Permit flexibility for agricultural tourism including farm markets and farm tours.
9. Unless associated with a cluster development, prohibit private road development west of 64<sup>th</sup> Street.

**Goal: Promote community design that protects natural resources and country lifestyle which is respectful of both rural amenities and the history of the Township.**

1. Require that developments with sparse natural vegetation provide natural plantings, fence rows, and other landscaping as scenic buffers and wind breaks.



2. Develop relationships with resource groups, like the Soil Conservation Service and the Macatawa Area Coordinating Council, to assist developers with context sensitive design and native plantings.
3. Institute standards for a certain amount of on-site amenities including high quality natural areas and/or agricultural open space as part of any development.
4. Restrict development on places identified as floodplain.
5. Ensure proper maintenance on storm water basins and traps through silt traps and buffer strips using such tools as 433 agreements, maintenance agreements and special assessment districts.
6. Promote natural looking entrances into the Township and at the perimeters and entrance points of developments which promote a rural feel to the community. Native or natural vegetation should be used and topography changes limited to prevent an overly groomed landscape.
7. Plan naturally landscaped common setback areas for residential developments adjacent to arterial or collector roads.
8. Require all new developments which have above ground, on-site storm water management systems to blend with the character of the development to prevent a stark engineered look.
9. Provide vegetative buffers between natural resources and development.
10. Promote conservation design developments that limit sprawl through proper site planning with respect to the existing land resources.
11. Limit impervious surfaces and provide buffer setbacks from natural features to alleviate any future flood events in designated floodplain areas.
12. Discourage a design pattern that isolates individuals to their property, or puts them on the road, rather than having non-motorized paths that connect properties and developments.
13. Encourage design which considers and incorporates elements of a rural or quiet lifestyle, providing open space viewing opportunities for as many residents as possible.
14. Promote innovative development techniques, such as Planned Unit Developments and Cluster Housing Options as a means of providing a proper balance between residential development and open space.



15. Discourage the removal of natural features like natural topography, vegetated fence rows, thickets, mature trees, and un-mown fields.
16. Evaluate and amend the Township subdivision ordinance to reflect rural and neighborhood design objectives.
17. Require that all developments with a net density of over 2 units per acre be connected to public water and sewer.

**Goal: Design neighborhoods to be safe, comfortable, and unique places.**

1. Create design standards which include traffic calming design features to keep streets a safe and comfortable place for bicycling, and walking. For example, in order for an interconnected street network to provide desirable residential environments, street widths, and corner curb radii should be as narrow as possible, while providing for safety and emergency vehicle considerations. This forces traffic to slow or be “calm” in neighborhoods.
2. Tailor landscaping, streetscape, public facilities, cultural features, and other fixtures to define the individual identity of distinct neighborhoods.
3. Develop design standards and regulations to allow for New Urbanism/Neo Traditional Development in appropriate locations. Housing in such developments should be designed with quality architecture that brings character to the development. Overall design should encourage pedestrian/neighbor interaction.
4. Permit thoughtfully designed small-scale, mixed use developments to complement the historic settlements of Beaverdam, Vriesland, and Drenthe.
5. Discourage a design pattern that isolates individuals to their property—or forces them out on the street to walk or bike. Promote future development and redevelopment of neighborhoods to create a comfortable and attractive walking and driving environment. Include such amenities as neighborhood parks, street trees, sidewalks, appropriate buffering between uses, and interconnection of uses.
6. Develop detailed planned unit development standards to promote creative development in appropriate areas of the Township.
7. Consider relaxing setback and frontage requirements for residential development on neighborhood streets. Conversely, increase frontage and setback requirements on collector or arterial streets.
8. Encourage the development of residential areas on a neighborhood unit basis with neighborhoods of sufficient size that will economically and conveniently support community services.



9. Limit the size and scale of subdivisions and multi-family developments to help create a close-knit, neighborhood feel.
10. Investigate building and site design standards for the zoning ordinance pertaining to multi-family developments to both ensure building longevity and prevent blight.
11. Implement appropriate traffic calming techniques and traffic management principals for intensive development such as speed tables and traffic circles to keep traffic speeds under control.

**Goal: Foster well-designed viable commercial centers in the Township.**

Objectives:

1. Promote consolidated commercial development in historic settlement areas and along select portions of M-21 rather than permitting sprawling strip development along transportation corridors.
2. Develop and maintain building and site design standards for the zoning ordinance pertaining to commercial, industrial and mixed-use development.
3. Promote developments and neighborhoods which have integrated pedestrian access and connections to neighboring businesses.
4. Require amenities within commercial and industrial developments for employees and guests like open space, outdoor seating, and interconnected foot paths.
5. Enact maximum parking standards, maximum setbacks, and deferred parking language in the Zoning Ordinance to minimize expanses of excess pavement.
6. Encourage commercial and industrial development which is not merely relocated from other areas, leaving vacancies and economic displacement in the greater metro area.
7. Permit additional commercial and industrial development only in areas served by public water and sewer.

**Goal: Promote and enhance the community trail system and open spaces.**

Objectives:

1. Ensure usable open space in close proximity to development which can be accessed on foot from within the development without trespassing.
2. Encourage a system of interconnected and safe bicycle paths, routes, trails, and pedestrian facilities which link residents with commercial developments, other subdivisions, and public property.





3. Where necessary consider making important cross-community connections, by acquiring additional easements along and into the greenway/trail system.
4. Develop a series of off-street paths either adjacent to the street where sidewalks would typically be placed or within dedicated greenbelt areas (i.e., waterways or parks).
5. Provide posted paths on-street routes (streets shared by both motorists and bicyclists) within the Township. Work with adjacent communities to extend the routes across community boundaries.
6. Consider pedestrian street crossing improvements including:
  - Pedestrian "walk" and clearance times set in traffic signal timing/phasing programs;
  - Installation of crosswalks where none are present;
  - Provision of islands in wide intersections to provide refuge for pedestrians;
  - Increased crosswalk visibility through better signing, pavement markings, and lighting;
  - Calming mechanisms for vehicle traffic at intersections.

**Goal: Develop a transportation system which is efficient in terms of costs, quantity and quality of service with regard to needed capacity, reasonable speed, convenience, and safety for all users.**

Objectives:

1. Devise a schedule for road improvements which does not unnecessarily increase development pressures in areas intended for agricultural land use.
2. Design or upgrade road systems to minimum paving standards.
3. Develop access management standards for M-21 and other heavily traveled corridors which include provisions for cross-access and shared driveways between properties.
4. Develop neighborhood streets to provide direct connections to local destinations, such as neighborhood centers and adjacent neighborhoods, without requiring every trip to go onto the main road network.
5. Avoid high volume collector or arterial streets dividing neighborhoods.
6. Create a "high hazard" overlay zoning district for the Airpark flight approach area.
7. Promote interagency coordination and cooperation to develop trails and recreational facilities.



8. Use greenway/trail systems to interconnect and link neighborhoods, schools, parks, community centers, shopping areas, job sites, and other destinations within the Township and surrounding communities.
9. Utilize riparian corridors, county drainage ditch rights-of-ways, greenbelt areas, utility rights-of-way and existing trail alignments wherever possible in trail system development.
10. Consider working with the County to enact a truck route ordinance to control truck traffic through the Township.
11. Develop transportation cross-over between the southern and northern portions of the community.
12. Improve railroad crossing areas to address public safety concerns along Chicago Drive.
13. Implement and improve the public transit system(s) as the opportunities present themselves.
14. Consolidate existing driveways on arterial and collector streets as opportunities present themselves.
15. As part of the site plan review process, limit the number of access points to arterial or collector roads for new development.
16. Monitor residential areas in cooperation with the County Road Commission, to facilitate speed limit reductions as appropriate.
17. Encourage pedestrian and bicycle connections within and between residential developments.
18. Promote paved shoulders on both sides of all county roads as they are improved, a minimum of three feet each side.
19. Mark all intersections with cross-walks as they are improved throughout the Township.

**Goal: Monitor specific roadway and signaling improvement needs and continue a close working relationship with the County Road Commission to facilitate upgrades as needed.**

The Township recognizes that improvements to roadways and intersections within the county road system are ultimately considered by the County Road Commission using accepted engineering practices--including those outlined by the American Association of State Highway and Transportation Officials (AASHTO). However, the Township intends



to remain proactive in roadway improvements. There are several portions of the Township's road system that will need upgrading, as traffic and development patterns dictate. The following areas are anticipated to need improvements at some point in the future, some may come during the planning period while others may be a couple decades away.

Objective: Monitor the following anticipated roadway and signaling needs within the Township:

1. Signaling at Chicago Drive, CSX Railroad, and 48<sup>th</sup> Avenue.
2. At the 96<sup>th</sup> Avenue and Adams Street intersection; right turn lanes, traffic signal modification, and pedestrian crosswalks.
3. Include left and right turn lanes and traffic signal at the 64<sup>th</sup> Avenue and Adams Street intersection.
4. Signaling at Chicago Drive, CSX Railroad and 64<sup>th</sup> Avenue.
5. Signaling at Chicago Drive, CSX Railroad and 72<sup>nd</sup> Avenue.
6. Signaling intersections along Byron Road as needed with dedicated left and right turn lanes.
7. At the New Holland Street and 96<sup>th</sup> Avenue intersection; a fully signalized intersection with dedicated left and right turn lanes.
8. A four-way stop with a dedicated left turn lane westbound and right turn lane eastbound at the New Holland Street and 72<sup>nd</sup> Street intersection.
9. Signaling the intersection of Perry Street and 64<sup>th</sup> Avenue.
10. Signalize the Adams Street/56<sup>th</sup> Avenue intersection.

**Goal: Keep in mind the long term and very long term needs for transportation infrastructure and make decisions based on an understanding of those needs.**

Typically, the planning timeframe for a Master Plan is 20-years (with a minimum of 5-year updates). However, the view of the Township transportation system should extend beyond this timeframe because transportation corridors have a profound impact on long-term development. The general timeframes presented below are intended to be fluid, that is, it is recognized that the rate and amount of development dictates road improvement needs-- the exact timing of which cannot be predicted.



**Short Term (within 10 years--2015)**

1. Increase shoulder width on the I-196 overpass bridge on 88<sup>th</sup> Avenue in conjunction with road improvements.
2. In cooperation with Holland Township, provide right turn lanes, traffic signal modification, and pedestrian crosswalks at 96<sup>th</sup> Avenue and Adams Street.
3. As part of the Byron Road Bridge improvements, provide a 6-foot paved shoulder on both sides of Byron Road.
4. Provide a 4-lane bridge south of Adams on 96<sup>th</sup> Avenue at the Black River.
5. On Adams Street, extend the off-street path east past 80<sup>th</sup> Avenue to connect to the future Macatawa trail network and provide pedestrian access to Drenthe Grove Park and Drenthe Town Center.
6. On Byron Road, provide off-street path (on the south side of the road) to connect to the Macatawa Trail (west of 76<sup>th</sup> Avenue) and extend to Vriesland Town Center.
7. Coordinate with Blendon Township to pave New Holland Street as three lanes with a minimum three-foot wide shoulder.
8. Provide an off-street sidewalk/path on the north side of Gordon Street from 88<sup>th</sup> to 84<sup>th</sup>.
9. Provide an off-street sidewalk/path from Gordon, north on 84<sup>th</sup> to Byron Road.
10. Investigate the possibility of utilizing existing easements to develop paths through subdivisions.
11. Along 88<sup>th</sup> Avenue, provide crosswalks with pedestrian signs at or near Maple Court, Gordon Street, and Adams Street.

**Intermediate (Approximate timeframe, 11-20 years)**

1. On New Holland Street, provide an off-street sidewalk on the south side of the street between 64<sup>th</sup> Avenue and 96<sup>th</sup> Avenue to provide a safe pedestrian and bicycle route which connects to any future paths going south through the Township.
2. Provide an off-street bike path on Riley Street from 64<sup>th</sup> Avenue west to existing trail.



3. Upgrade 96<sup>th</sup> Avenue to a 3-lane roadway with 3 ft. shoulders south of Chicago Drive to Adams Street.
4. Promote altering Chicago Drive to move the current westbound lanes adjacent to the eastbound lanes between 76<sup>th</sup> and 48<sup>th</sup> Streets.
5. Provide an off-street path on the west side of 84<sup>th</sup> Street from Ottogan to Frontage.
6. Continue the off-street pathway on Byron Road from Macatawa Trail westerly to the City of Zeeland.
7. On 72<sup>nd</sup> Avenue:
  - a. Include a traffic signal interconnection on Chicago Drive with the C.S.X. Railway crossing.
  - b. Provide sidewalks on the east side of the road from Riley Street, north to New Holland Street.
8. Plan for the possible elimination of the CSX crossing and permit local access to industrial development to 76<sup>th</sup> Avenue, only east of 80th Street.
9. Provide an off-street path on Ransom or Quincy between 72<sup>nd</sup> Avenue and Holland Township; depending on emerging development patterns.

**Long Term (Over 21 years)**

1. Provide an off-street path on the north side of Ottogan Street between 96<sup>th</sup> Avenue and 76<sup>th</sup> Avenue.
2. Provide a signalized, grade-separated crossing at the C.S.X. Railway and the 64<sup>th</sup> Avenue intersection.
3. Work with Blendon Township, the County Road Commission, and the Macatawa Area Coordinating Council to improve New Holland Street and to provide a 6-foot paved shoulder on the both sides of the street between 64<sup>th</sup> Avenue and 96<sup>th</sup> Avenue.
4. For I-196:
  - a. Develop an interchange at 48<sup>th</sup> Street.
  - b. Provide full underpass or overpass at 72<sup>nd</sup> Street.
5. For the U.S. 31 Bypass:



- a. Provide an interchange at 76<sup>th</sup> Avenue and Chicago Drive. Incorporate a bike path and pedestrian crossing across Chicago Drive with this interchange.
- b. Provide an overpass or underpass for New Holland and Ransom Streets between 84<sup>th</sup> Avenue and 88<sup>th</sup> Avenues.
- c. Provide an overpass for Quincy Street between 76<sup>th</sup> and 80<sup>th</sup> Avenues.
- d. Close 76<sup>th</sup> Avenue, north of Chicago Drive at the time of bypass construction.
- e. Make overpasses wide enough to accommodate a safe cyclist and pedestrian path.



## Future Development Concepts

The Future Land Use Map, following, depicts general land use categories which will guide future land use decisions in the community. It is the Township's intent to adhere to these general land use categories when developing zoning regulations or making decisions about zoning changes. As presented, the future land use map reflects nearly 3,000 acres of land in 169 parcels (over 3 acres in size) in the Medium Density Residential and the Mixed Use settlement land use categories. At the current Township average household size (3.02 persons per household) with an average density of one dwelling unit per half-acre of land; the allocated area would accommodate 143 *more* households than the 2020 population projection. Therefore, the Township believes the current land use categories are more than sufficient for the planning period. Prematurely opening lands for higher density development can inefficiently scatter residential developments and prevent a more cohesive, well designed network of neighborhoods.

It is also recognized that a couple of events could greatly change the demand for home sites in the Township, specifically, the development of a school in Section 22, and the development of an additional sewer service district associated with a Byron Road lift station. Should one of these two developments come to fruition, it will be the Township's policy to re evaluate the future land use map immediately. Regardless, it is the intent of the Township to reevaluate the future land use map within 3 years of the adoption of this plan. Of particular concern, are areas west of 76<sup>th</sup> Avenue which, when transitioned for development, should remain low density or cluster developments as a buffer to floodplain and park lands to the west.

### Agriculture

This land is to be used primarily for large scale agricultural operations including livestock production. The designation is applied to productive soils, particularly muck soils, and large tracts of land well suited for and still active in agricultural production. Some portions of the agricultural designation include the flight approach of the Airpark. Limited residential development will be permitted at low densities in agricultural areas. Rural cluster development will be encouraged on less productive soils and near natural amenities. Net density will not be more than .9 units per acre.

### Low Density Residential

These are areas located near sensitive natural features and between settlement areas and agricultural lands. The land has access to public sewer and water and is nearer to higher density residential development pushing out from the Zeeland / Holland metro area. Along Byron Road out to Vriesland, the low density area will be restricted by U.S. 196 to the north and is intended to terminate ¼ mile to the south of Byron Road. Likewise, the ¼ mile limit will be applied along 64<sup>th</sup> Street south, between Vriesland and Drenthe. Along Adams Street, east of Drenthe, the low density area is intended to extend ½ mile north of Adams Street due to the relative depth of the majority of parcels.



To the south of Adams Street and west of 64<sup>th</sup> Street, low density residential uses are intended to terminate at the power line corridor until 84<sup>th</sup> Street. West of 84<sup>th</sup> Street the bulk of lands to the southern border of the Township are earmarked for low density development rather than agricultural due to their close proximity to the City of Zeeland. Net density in this land use category is 2 units per acre. Cluster developments are encouraged.

#### Medium Density Residential

These areas are areas adjacent to the City of Zeeland which are served by public water and sewer, or can be readily served by public water and sewer. Medium density areas will be strictly limited to areas in immediate proximity to existing sewer mains. Net density will not exceed 3 units per acre. Any development of over 2 units per acre shall be served by public sewer. Cluster developments are encouraged if they do not undermine the economics of providing public sewer to the area. The cost of water and sewer extensions for developments will be borne solely by the developer in these areas.

#### High Density Residential

Land in this category is in close proximity to more urbanized areas and major transportation corridors. It must be served by public water and sewer for development at this density. It is intended for small scale multi-family development and high density single-family development. Net density will not exceed 4 units per acre. The cost of water and sewer extensions into developments will be borne solely by the developer in these areas.

#### Mixed Use Settlement

These areas are in close proximity to the historic settlements of Beaverdam, Vriesland and Drenthe. They are intended to develop as quiet yet dynamic areas which complement the historic settlements. The original settlements were consolidated mixed uses which were designed for pedestrian movement and local convenience. It is the intent of this land use category to advance those concepts. All new development needs to recognize and accentuate the village-like atmosphere of the original settlement. Mixed use development will be small scale and of traditional design and residential uses will be compact in nature. Commercial developments must be less than 10,000 square feet in size. Commercial uses will be limited to neighborhood retail, professional offices, and service businesses. It is intended that commercial and service uses will provide second floor housing or office space as part of the development. Pedestrian accommodations will dominate the design and scale of the mixed use model and vehicular facilities will be masked (e.g., parking will not be provided in the front yard). The cost of sewer extensions into developments will be borne solely by the developer in these areas.

It is recognized that specialty retail uses are better suited in central business districts, which is not the intended nature of the Mixed Use Settlement. The Township





recognizes the regional value of supporting the City of Zeeland, City of Hudsonville, and City of Holland's central business districts for specialty retail uses.

### Commercial

Township commercial areas outside the anticipated Mixed Use Settlement area are reserved for larger scale businesses (over 2,000 square feet in area), except regional retail uses. Regional retail uses are already developed in the Holland metro area in locations with ample road capacity and public services. Therefore, the Township will not support the use of commercial properties for regional retail development.

Highway convenience uses (e.g., fast-food, filling stations, or other businesses oriented to the traveling public) will be contained near the Byron Road Interchange or M-21 near the hospital. Limited areas along M-21 will serve local commercial needs including professional offices, local commercial and service uses. It is recognized that areas northerly of M-21 are limited by lowlands, hydric soils and a significant railroad grade. Conversely, southerly portions of M-21 are among the highest topographic points in the Township and also have limitations for intense development.

### Industrial

Except for designated sanitary landfill areas, this category is limited to areas immediately adjacent to the City of Zeeland or in close proximity to major travel routes.



**Insert Future Land Use Map**