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Purpose of a Master Plan

This Master Plan Update represents an opportunity to affirm and update the course for new development and redevelopment in Genoa Township as identified and described in the 2013 Master Plan. This Plan contains the community's vision, goals, objectives, and strategies and it is intended to guide future decision-making processes related to Land Use and development, as well as overall community quality of life.

The Master Plan addresses future Land Uses and community development, and other community features in a coordinated fashion. It portrays a clear statement of community goals and objectives, establishes a vision of the future, and includes plans to achieve the vision. If followed carefully, the Master Plan will have a lasting impact on the built and natural environment. Decisions made when the Plan is developed will likely be implemented over short-term, medium-term, and long-term timelines as specified in the Implementation Plan.

The Master Plan is long-range in its view and is intended to guide development in the Township over a period of 10 to 20 years, with reviews and any necessary updates occurring every five years to maintain consistency with the Michigan Planning Enabling Act of 2008. The information and concepts presented in the Master Plan are used to guide local decisions on public and private uses of land and the provision of public facilities and services. A sound Master Plan promotes a Land Use pattern that reflects a community's goals. It establishes long-range general policies in a coordinated and unified manner, which can be continually referred to in decision-making.

Lastly, the Master Plan aims to provide a complete picture of the historic and ongoing Land Use and development-related issues facing Genoa Township so that the reader has a full understanding of what is occurring within the Township

Frequent review and analysis of the Master Plan will strengthen the relevance and validity of local planning and zoning policies.

This Master Plan represents a continual effort by the Planning Commission and Township Board. A series of joint public meetings were held by the Board and Planning Commission to discuss the recommendations of the plan. Citizens, landowners and interested members of the general public also attended meetings and were involved with the discussion on the plan. A public hearing to present the draft plan was conducted prior to its adoption by the Township Board.

Genoa Township's last comprehensive Master Plan was completed in 1998, with amendments made in 2000, 2003, 2006, and 2013.

The Township regularly refines its zoning ordinance and subdivision regulations in response to changing conditions, goals, and the law. Thus, this Master Plan represents the latest in a series of documents and ordinances which will help to ensure that the Township maintains its desired community character.



Summary of 2022 Master Plan



1 | THE PLACE

The Master Plan starts with a review summary of long-term plans for Livingston County and the communities surrounding Genoa Township. It also identifies common objectives that will assist in identifying collaboration opportunities. It is followed by a summary of existing land use as well as information on local people and the economy. This information provides the background for the following chapters.



2 | THE PEOPLE

This section summarizes **public input** collected during the planning process. It also outlines the vision, goals and objectives for the long-term future of the Township. The Township started the update process with a joint meeting with members of all Boards and Commissions, to identify and prioritize the Township's strengths and weaknesses. The public input was gathered in two different phases:

- A **market assessment summary** in late 2020. The market assessment focused on both current and future market conditions for residential and non-residential activity. It included a consumer spending survey. This assessment was updated in 2021.
- An **open house (in-person and online)** was conducted on November 10, 2021. Open house participants were asked about the following: perception of the community, potential locations to identify gateways around the Township, preference of housing styles, recommended non-motorized transportation improvements, and general thoughts on the 2013 adopted Future Land Use map and proposed goals. The 'public input' chapter provides more information and findings.

The participants were in general agreement with the concepts and changes proposed and emphasized the importance of preserving the community's rural character and natural features.

The 2013 Master Plan included a variety of statements that are either objectives or action strategies geared at future improvements. The 2022 Master Plan reframes those statements as goals, objectives and action strategies to help the community better visualize the future and stay focused on the implementation. The **2022 Master Plan goals** are broken into the following categories:

- Housing & neighborhoods
- Economic development
- Natural features
- Transportation
- Public facilities and services

Each goal is further broken down into sub-categories. The chapter includes measures of success to help track the implementation progress.





3 | THE PLAN

The plan includes a **Future Land Use Plan Map**, an illustrated guide to how land will be used in the next 10-15 years based on the existing conditions analysis, public input, and goals and objectives. Except for the areas along Grand River corridor, there are no significant changes to future land uses compared to the 2013 Master Plan. Two mixed-use districts are recommended that covers most the Grand River Avenue to allow flexibility of land uses. In these areas, commercial and residential uses, provided with a horizontal or vertical mixed use development pattern, will complement each other, creating “hubs” or “districts” of mutually supportive uses.

The plan carries forward two recommendations from 2013 Master Plan, with an emphasis to prioritize development along the Grand River corridor before moving south of the Township.:

- **I-96/Latson interchange Subarea plan.**
- **Growth area boundary.** No changes proposed; it is recommended to revisit the growth zone boundaries with the next Master Plan update.

The **Housing Plan** focuses on current housing trends and provides general recommendations for alternative housing strategies between single-family homes and apartments to create diverse and quality housing stock in the Township - with a focus on smaller housing types closer to the Grand River Corridor where more compact and walkable development is envisioned. The plan also includes general guidelines and recommendations for non-motorized transportation linkages and sustainability principles.

The **Commercial Corridor Development plan** is divided into three sections:

- The Market Opportunities section will present opportunities for Genoa Township and begin to identify action strategies to capitalize on those opportunities.
- The Grand River corridor redevelopment section outlines a comprehensive vision for the redevelopment of the corridor.
- Three redevelopment sites were identified as currently vacant or under-utilized, given their location, unique features, and size. Concepts for redevelopment suggest key components that are envisioned and approaches to facilitate redevelopment.



4 | THE PROGRAM

This section includes two items

- **Zoning plan**, that works as a road map for changes needed to the Zoning Ordinance that regulates development.
- **Action strategies**, that will help the Township implement the Master Plan's key recommendations. These strategies are broken into categories that help the Township organize implementation. For example, most of the “zoning strategies” will begin with the Planning Commission. The Township Board and staff will incorporate the “advocacy” items through land use policy, discussions with applicants and interactions with residents.



THE PLACE

History & Regional Setting

Community Planning History

Historically Genoa Township was characterized by rural agricultural Land Uses, with resort-type development around Lake Chemung and the other 15 lakes in the region. In the early 1970's the rural character began to change. Suburbanites from the Detroit and Ann Arbor areas began looking at Livingston County as a convenient commute between this quiet lifestyle and metro area employment.

Following the residential growth have been supportive commercial and public facilities. The small town atmosphere associated with the cities of Brighton and Howell attracted residents, businesses and small industries to this area. Gradually the area began to establish its own healthy employment base. Providing sanitary sewer service in parts of Genoa Township has contributed to the rapid pace and intensity of its growth. According to Livingston County and Genoa Township figures, most of the recent development in Genoa Township has been residential.

The Township hall sits on property that originally belonged to the Carl Christian Conrad family. It was first purchased from the United States Government in 1830. After the Civil War, there was no one left to farm the land, and it was purchased by John Schoenhals.

John had three daughters and one son. The son was named Oscar. Oscar married Lyle's father's sister Anna. In 1950, Anna bought the brick two-story home on ½ acre just east of the farm on Brighton Road for \$10,000, and Lyle bought the 149-acre farm on Dorr and Crooked Lake for \$15,000. The 2-story brick home on Brighton Road still stands today.

The land was farmed from 1950 until 1962 when the Michigan State Highway came through and condemned eight different parcels in the Township to construct Interstate 96. The State Highway Department gave the homesteaders 30 days to get out of their way. The Herbst family received \$17,500 for their condemned 43.9 acres, which was then cut in half on a 45° angle.

The dairy business was no longer viable because there wasn't enough land close to the barn to take care of the cows; the barn was now on the north side of the expressway and the house was on the south side. That was when Mr. Herbst went into the beef business, purchasing cattle from Mr. Fisher of the General Motors Fisher Body family.



Regional Setting

Genoa Charter Township is located in southeastern part of Livingston County , Michigan. It is located between the cities of Brighton and Howell. The Grand River Avenue corridor and I-96 Interchange provide connect the Township business district to cities of Brighton and Howell. The Township is centrally and strategically located within 45 miles of Detroit, Lansing, Ann Arbor, Flint and Toledo. The Township has a total area of 36.3 square miles, of which, 34.2 square miles of it is land and 2.1 square miles of it (5.78%) is water.

MAP 1.1. GENOA TOWNSHIP: LOCATION



Regional Planning

Livingston County Master Plan 2018

Livingston County Planning Department Staff in collaboration with the Livingston County Planning Commission have drafted this Livingston County Master Plan. All twenty municipalities in Livingston County have a Master Plan and a zoning ordinance. This county-wide plan is intended to guide the content of these local municipal plans. The plan focuses on identifying an issue such as housing, infrastructure, etc. and provides a general path with general goals and highlighting best practices implemented or considered in surrounding communities and beyond.

The plan does not make any recommendations specific to Genoa Township. However, this plan provides extensive references to best management practices and encourages the local communities to duplicate some recommendations in their respective Master Plans. In general, the plan recommends Southeast County to focus on promoting regional public transit options, regional trail connections, and to expand/improve recreational options/facilities. The plan refers to worksheet tools for evaluating stormwater ordinances, evaluating aging in place readiness, and using placemaking as a tool for economic development.

Livingston County Transit Plan April 2019

The Livingston County Transit plan is prepared for Livingston County and Livingston Essential Transportation Service (LETS). This plan provides a set of short, mid, and long-term action plans and related funding and governance options for implementation over the next 5-10 years. The plan aims to improve the existing LETS transit system and services. LETS is currently headquartered west of Howell, but the bulk of its pick-ups and drop-offs occur further east in the Grand River Avenue / I-96 corridor from Howell to Brighton through Genoa Township.

The plan refers to two action items that could directly impact Genoa Township and necessary improvements should be planned accordingly.

1. The plan foresees a new bus route along Grand River Avenue through Genoa Township with three potential bus stop locations. It is crucial to complete the sidewalk network along Grand River Avenue and to the future stops to create more equitable access to these services.
2. LETS is also considering a second facility near the City of Brighton. This would require the local municipality's cooperation in locating/developing a site and monetary contribution. The new facility would include a fueling station, bathroom, secured parking for LETS vehicles, 10 to 15 parking spots for visitors, and space for dispatch staff. It is estimated to cost 6-7 million with an approximate local share of 56,000 dollars. The location is yet to be determined.

Livingston County Parks and Open Space Plan 2019-2023

The plan is not intended to plan for the recreation needs of the local units of government in Livingston County. It is projected that the City of Brighton and Handy and Genoa Townships will experience the largest percent growth in population, with over 60% growth. This would result in increased demand for recreational facilities to serve the users.

Genoa Township hosts Fillmore County Park which consists of 198 acres of land in the southeast quadrant of Livingston County, where agriculture is more prominent. It is easily accessed off Grand River Avenue about midway between the cities of Howell and Brighton. The entire park parcel was recently rezoned to Public and Recreational Facilities. There is a Master Plan for a phased development of the park.

One of the goals of this plan is to 'build mutually beneficial relationships with public and private park and recreation providers to help establish Fillmore County Park.' The recommended implementation strategy to achieve this goal is to maintain good communication with Genoa Township to avoid duplication of recreation facilities within the Township.



Southeast Livingston Greenways

November 2000

Southeast Livingston Greenways (SEL) plan is prepared by Southeast Michigan Greenways and the Livingston County Planning Department's Greenway and Open Space initiative. The SEL Greenways plan primarily focuses on the development of non-motorized corridors and conservation areas within southeastern County. This plan believes that thoughtful conservation projects will enhance the quality of life without destroying the rural character of communities like Genoa Township. This plan identifies primary and secondary conservation areas, which are primarily existing natural areas that need to be protected and maintained. Non-motorized infrastructure is currently non-existent, and this plan provides a big picture to guide the non-motorized development.

Within Genoa Township, the plan identified a potential major greenway corridor along the railroad that runs north to south to the west of Chilson Road. An on-road non-motorized network is also recommended along Chilson Road that connects the City to the Brighton state recreation area. A network of on-road pathways is recommended that connect to the Chilson Road path. This plan recommends a list of approximately 22 non-motorized segments throughout the Township with a total estimated cost of 3,595,000 dollars. This plan was used as a reference in the Bike paths and Greenway's chapter of Townships 2013 Master Plan. However, the Township Master Plan proposed major pathways along Nixon Road and Grand River Avenue to benefit from existing built non-motorized infrastructure.

Grand River Avenue Access Management Study

June 30, 2014

The Grand River Access Management Plan is developed by the corridor communities in Livingston County along with the Michigan Department of Transportation (MDOT), the Livingston County Road Commission (LCRC), and the Southeast Michigan Council of Governments (SEMCOG). This plan provides a cooperative and coordinated approach to access for planned and existing development along the corridor.

The longest segment of the Grand River Avenue corridor extends through Genoa Township. The western half of the corridor in Genoa Township is under the jurisdiction of MDOT and the remainder under the LCRC. The Land Use along the corridor is mainly commercial with some industrial and single-family residential. Genoa Township's 2013 Master Plan recommends reconstructing Grand River Avenue with a narrow median in the existing right-of-way. The access management plan recommends implementing best management practices such as limiting driveways and minimum driveway spacing requirements at certain locations along Grand River Avenue. The plan also recommends incorporating the Grand River Avenue Access Management Plan into communities' local Master Plan either in total or by reference to provide a legal basis for requiring access design in the site plan review process. One of the plan goals is to promote continued coordination and communication among SEMCOG, MDOT, Livingston County, local governments, and the public during the development review process.

Crosstown Trail- Howell Area Non-motorized Trail Study

2003

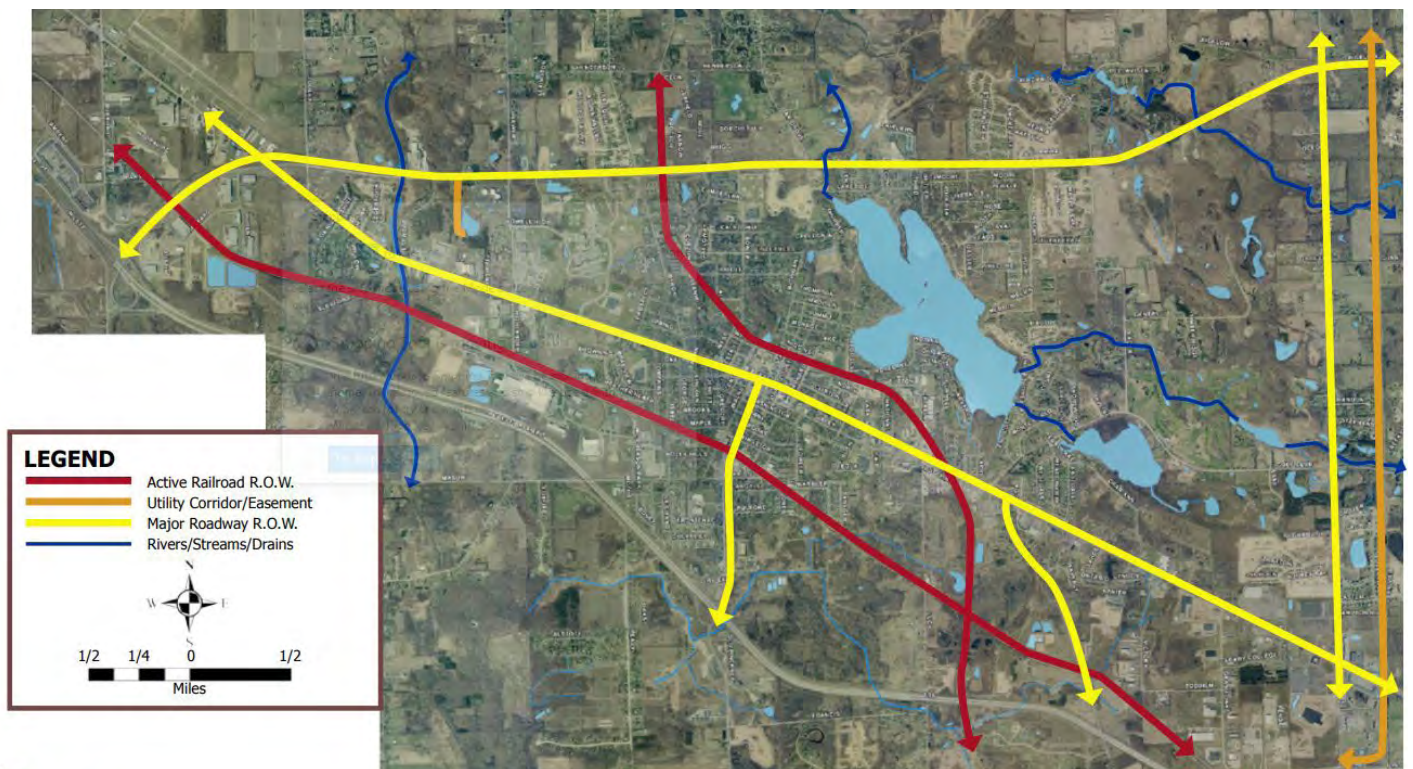
The city of Howell and MDOT developed this plan with a goal to creating a non-motorized transportation system connecting M-59, Latson Road, and I-96 BL (Grand River Avenue). The plan aims to use the Man-made corridors are areas such as road rights-of-way, active railroad rights-of-way, abandoned railroads, and utility corridors/easements to provide for safe non-motorized transportation. Genoa Township was one of the members of the steering committee.

The study area as defined in the plan includes areas immediately adjacent to and contained within the triangle created by M-59, Grand River Avenue, and the Detroit Edison utility corridor just east of Latson road. The area is contained entirely within Livingston County and within portions of the City of Howell, Howell Township, Genoa Township, Oceola Township, and Marion Township.

The eastern boundary of the crosstown trail loop. Referred to as Detroit Edison Corridor Spur is approximately 3.1 miles long that is located entirely within the Township and acts as the main north-south link between M-59 spur and Grand River Avenue Spur. This would be also connecting the Latson Interchange area near Grand River Avenue intersection to City of Howell.



Sketch of Proposed Detroit Edison Corridor Spur,
Looking North from Aster Drive



INVENTORY & ANALYSIS: CORRIDORS MAP

Adjacent Communities: Long Range Planning

Oceola Township

2007

Land Uses. On western border with Genoa, Oceola Township has low/medium density residential and recreational uses planned. Agricultural and large lot residential uses are planned for the eastern half of the border with Genoa Township. This is compatible with the uses proposed along that border in Genoa, which include low-density residential, large lot rural residential, and agriculture/country estate.

Goals. Oceola and Genoa Townships are both highly auto-oriented communities. Both have goals to promote growth of residential areas near existing commercial nodes and major roadways and to promote nonmotorized transit through the development of greenways and trails. Both communities are interested in conserving open space and natural features, as well as adding and expanding industrial, technology, and research-based uses where appropriate.

Transportation/Non-motorized. Planning for a north to south greenways trail in the ITC corridor that connects with the Cross Town Trail is underway. This hike/bike trail would connect Genoa Township to the southwest corner of Oceola via Grand River.

Implementation. On western border with Genoa, Oceola Township has low/medium density residential and recreational uses planned. Agricultural and large lot residential uses are planned for the eastern half of the border with Genoa Township. This is compatible with the uses proposed along that border in Genoa, which include low-density residential, large lot rural residential, and agriculture/country estate.

Other. Oceola recognizes that many of their residents go to Genoa to shop

Brighton Township

2020

Land Uses. The northern border with Genoa Township is zoned for single family residential, open space, and has some undeveloped land. The southern part of the border is zoned for institutional and commercial retail uses. This is compatible with Genoa's future Land Uses in this area, which include large lot rural residential, low density residential, and small lot single family residential uses. General commercial and neighborhood commercial uses along Grand River in Genoa are compatible with Brighton Township's zoning for the area.

Goals. Both Brighton Township and Genoa Township are interested in providing a variety of home types in well-designed neighborhoods with a suitable amount and variety of businesses to offer goods, services, and employment opportunities and a provide a sustainable tax base to meet current and future needs of residents. They are also interested in creating a safe, multi-modal transportation system and are committed to encouraging conservation of natural features, especially water bodies and wetlands. Both communities are committed to being able to provide parks and open space for resident use.

Transportation/Non-motorized. This Master Plan does not show any proposed future connections to Genoa Township. It does have a plan in place, including action items and responsible parties, for working towards transportation goals for motorized and nonmotorized transportation.

Implementation. Brighton Township mentions need to coordinate with adjacent communities on road improvements and design, watershed and stormwater management including developing a regional watershed plan and shared regulations.

Other. Clark Lake Park, located on the border with Genoa Township, proposed permitting public passive recreation access to Clark Lake Conservation Area for hikers and mountain bikers.



Marion Township

2015 (2021 underway)

Land Uses. Marion Township permits low density residential uses along its border with Genoa Township. This is compatible with the uses in Genoa, which are agriculture/country estate and large lot rural residential uses.

Goals. Marion Township and Genoa Township both stated goals to balance growth and development with preserving natural features. Both communities also have goals specific to protecting environmentally sensitive areas such as wetlands and water bodies from the impacts of development. They are both committed to recreational opportunities, although Genoa wants to maintain theirs while Marion would like to expand their offerings. Encouraging development only in areas where there is currently adequate infrastructure (Marion) and providing utility improvements where development is best suited and creating a growth boundary (Genoa) are also similar goals. Both communities are also interested in having industrial activities where it is compatible with surrounding uses. Similar to Genoa, Marion Township is also committed to encouraging a variety of residential dwelling types to meet the needs of a changing population. Finally, Marion Township is also interested in providing safe multi-modal transit options for all user, including promotion of a greenway system.

Transportation/Non-motorized. This Master Plan does not show any proposed future connections to Genoa Township, nor any action items or responsible parties for working towards transportation goals for motorized and nonmotorized transportation.

Implementation. Marion Township's Master Plan has specific goals to "coordinate planning efforts with neighboring communities regarding shared resources such as corridors and commercial, conservation and development areas" as well as cooperating and cost sharing with other municipalities to provide public facilities and services. Another goal is to "encourage uniform or compatible Land Use planning and zoning across municipal boundaries by coordinating efforts with the surrounding Townships".

Other. The official Future Land Use Map is a large, display-sized document that is separate from the Master Plan text and maintained by the Township.

Hamburg Township

2020

Land Uses. Hamburg's northern border with Genoa Township is planned to predominately allow public and private recreational facilities, with some conserved open space and low density residential. This is compatible with Genoa's planned uses of agriculture/country estates and low-density residential.

Goals. Hamburg Township and Genoa Township are both committed to preserving natural features while allowing development and growth where it is appropriate and conflict the least with surrounding uses. They are both invested in developing a mix of housing types to support all residents.

Transportation/Non-motorized. There is no set action plan for achieving the goals in this Master Plan. There are no proposed connections to Genoa Township.

Implementation. The Master Plan indicates an interest in working with the surrounding communities to expand mass transportation options in the area, particularly for the aging population.

Other. No relevant redevelopment strategies or area plans were discussed in the Master Plan.



City of Howell

2015 (2021 underway)

Land Uses. The southeast border of the Loop Area borders or is close to the border with Genoa, and is zoned for industrial uses. Genoa's border with Howell has a small section of General Commercial uses at the northern-most section, followed by small lot single family residential which may not be compatible with uses in Howell. Further to the south is a small area for public/institutional/utility uses. The southern most part of the shared border is zoned for research and development uses.

Goals. Howell and Genoa Township are interested in making part of their industrial areas focused on technology. Both communities have noted an interest and need to protect natural features, particularly bodies of water and wetlands.

Transportation/Non-motorized. A truck by-pass, initiated by the City of Howell, is being planned. Additionally a non-motorized path system has been proposed, and a complete streets environment was suggested for the Grand River Area Plan.

Implementation. The City is encouraging Genoa Township to continue the Loop Road from Lucy Road eastward to Chilson Road, Grand Oaks Drive, and eventually Latson Road.

Other. No overall Land Use plan. Focus on small area plans, identifying opportunities, challenges etc. Two study areas that border Genoa include the Loop Area and East Grand River Area.

City of Brighton

2020

Land Uses. The northern border with Genoa Township is zoned for innovation, and general and light industrial. The southern border with Genoa is a mix of moderate density mixed residential, single, family residential, and community service uses. This is not compatible with Genoa Township's planned residential (low density and large lot rural) and private recreation uses along Brighton's northwestern border. Uses are more compatible at the southern part of the border between the communities, where both communities have a mix of residential uses.

Goals. Both the City of Brighton and Genoa Township have goals to ensure that a range of attractive housing choices for all residents is available, and that residential options are accessible to neighborhood goods and services. Both communities emphasize the need to connect residential and commercial areas via motorized and non-motorized transportation, as well as the need for high quality site and building design in order to support neighborhoods, commerce, and employment centers. Goals to preserve open space and protect wetlands and woodlands are also common between the communities.

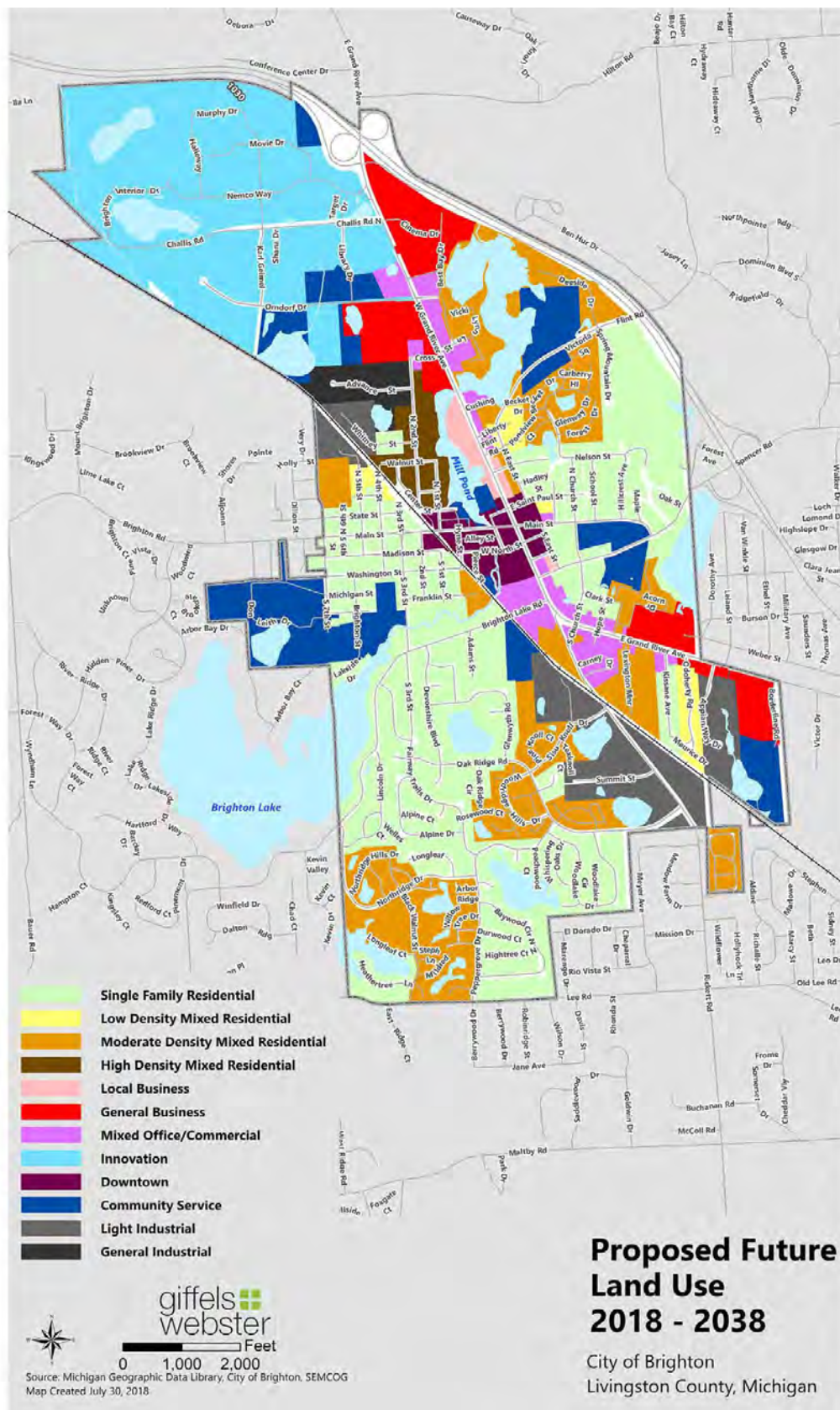
Transportation/Non-motorized. Brighton is proposing a bike route and a shared use path that nears the border with Genoa Township in two spots: the northwestern part of the city and just south of Brighton Lake. Their plan has an implementation matrix that outlines the action items under each goal, what plans it connects to, what groups are responsible for implementation, the time frame for completing the action item, potential funding sources, and supporting partners.

Implementation. During the visioning exercise for the City of Brighton's Master Plan, it was suggested that surrounding communities such as Genoa help finance additional parking options downtown.

Other. The City of Brighton has a specific downtown plan, which is a focus area for development.



Map FLU-1B: FUTURE LAND USE MAP



EXECUTIVE
SUMMARY

**MASTER LAND USE
PLAN**

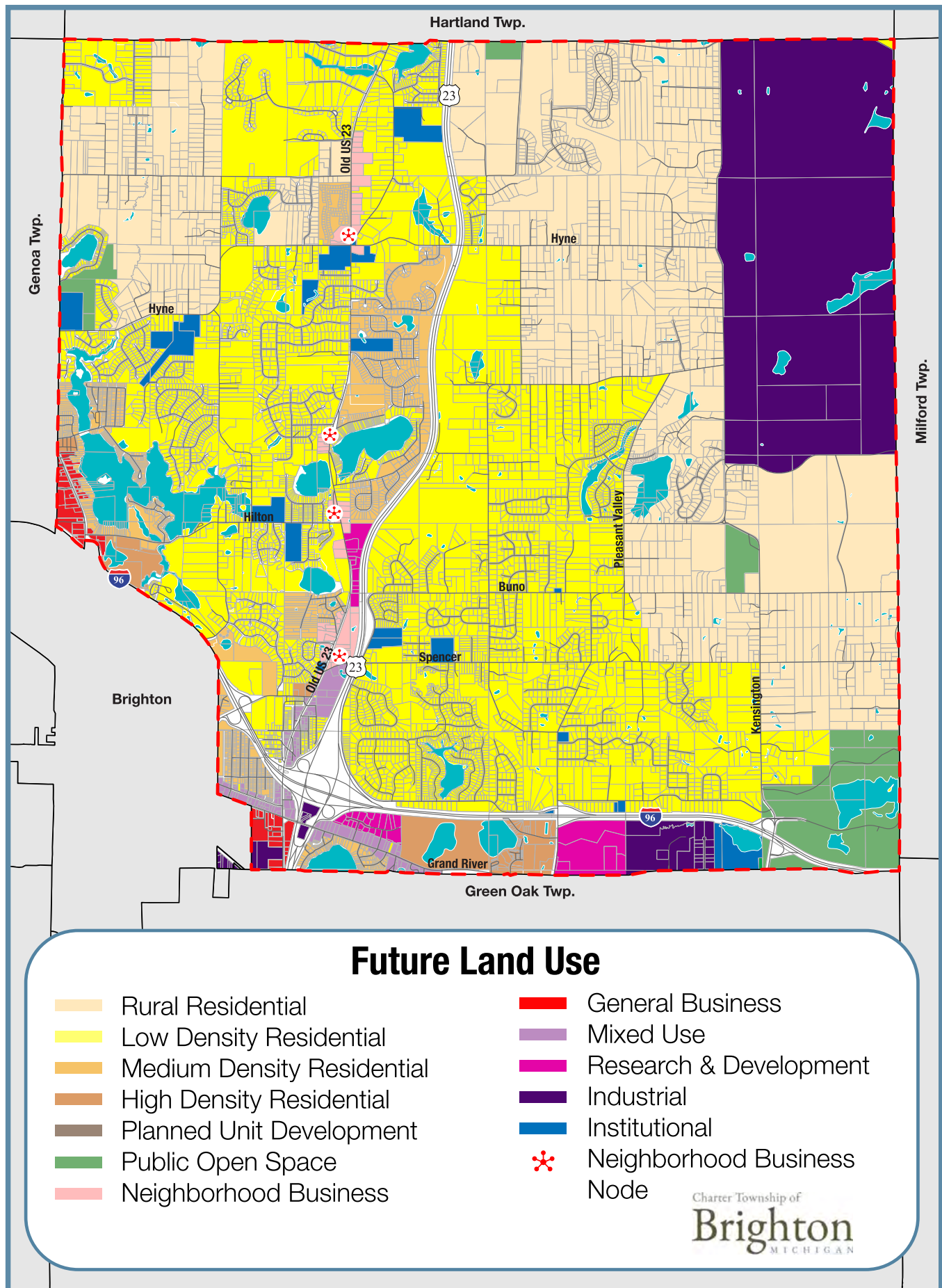
COMPLETE STREETS
PLAN

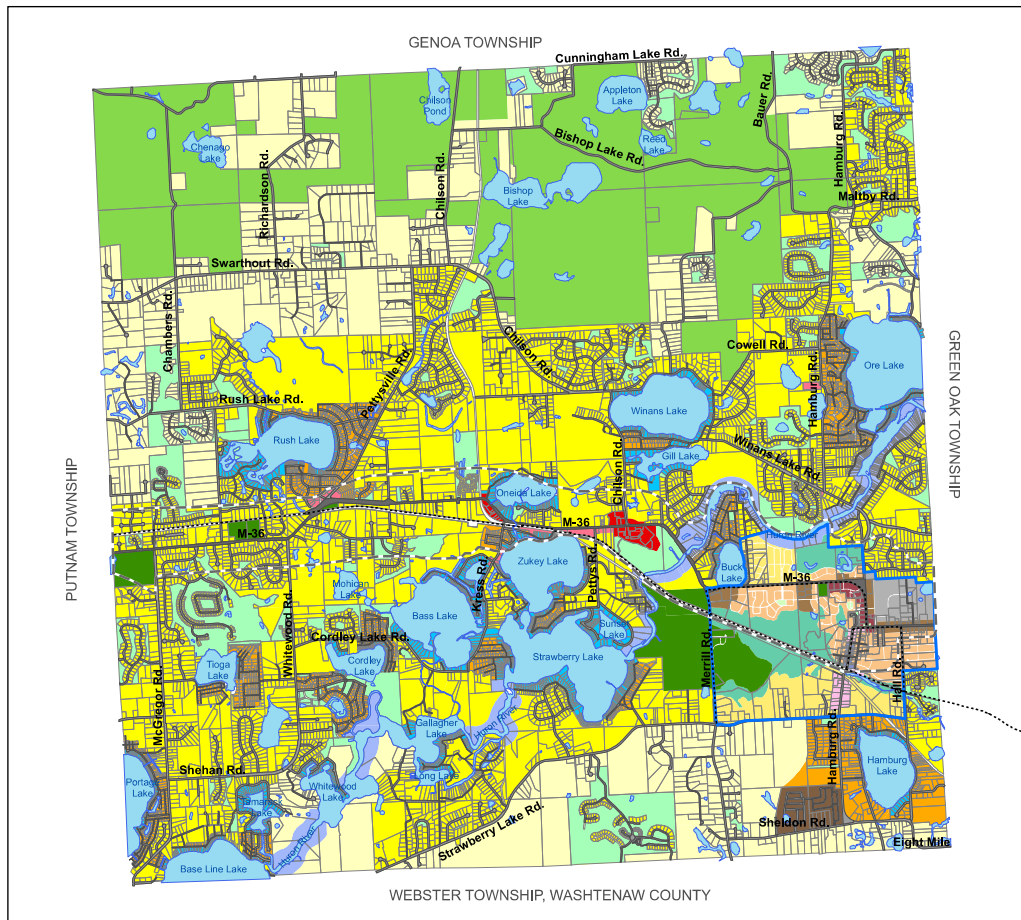
DOWNTOWN
PLAN

RECREATION
PLAN

APPENDIX







Map 4 Future Land Use

Hamburg Township,
Livingston County, Michigan

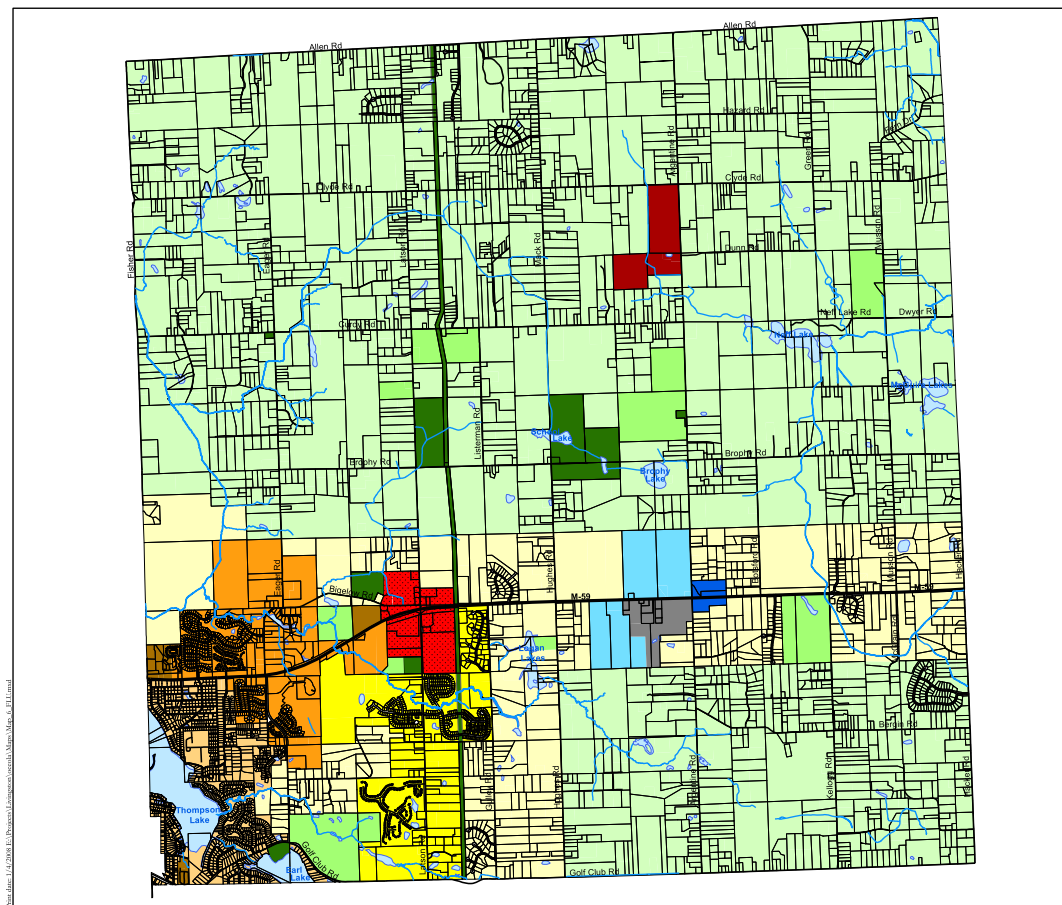
- High Density Residential
 - Medium Density Residential
 - Low Density Residential
 - Multiple Family Residential
 - Waterfront Residential
 - Natural River Residential
 - Neighborhood Commercial
 - General Commercial
 - Conserved Open Space
 - Public and Private Recreational Facilities
 - Public/Quasi-Public
 - Water Bodies
 - M-36 Corridor
 - Trail
- Village Center Area**
- Village Residential-2
 - Village Residential-10
 - Village Core
 - Village Gateway
 - Village Historic
 - Village Transition
 - Industrial
 - Conservation District
 - Parkland
 - Village Boundary

0 0.25 0.5 1 1.5 2 Miles



Source: Hamburg Township, 2020

08/2020



Map 6 Future Land Use Plan

Oceola Township
Livingston County, Michigan

- State Highways
- Roads
- Agriculture/Large Lot Residential
- Low Density Residential A
- Low Density Residential B
- Low/Medium Density Residential
- Medium Density Residential
- High Density Residential
- Village Center
- Rural Commercial
- Office
- Mixed Use
- Industrial
- Public/Semi Public
- Recreation/Open Space
- Water

Base Map Source: Livingston County Road Commission and Livingston County GIS, March 2006.

Data Source: McKenna Associates, Inc., November 2006.

0 3,500 7,000 Feet



3/05/2007
Adopted 11/8/07



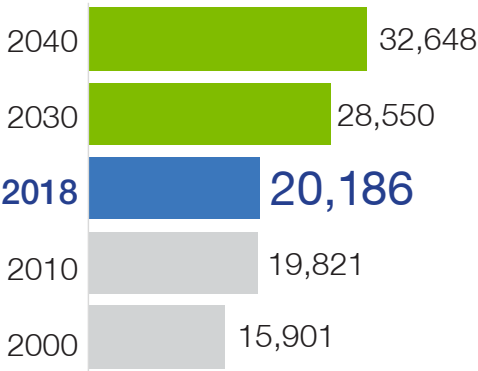
THE PLACE

Demographics

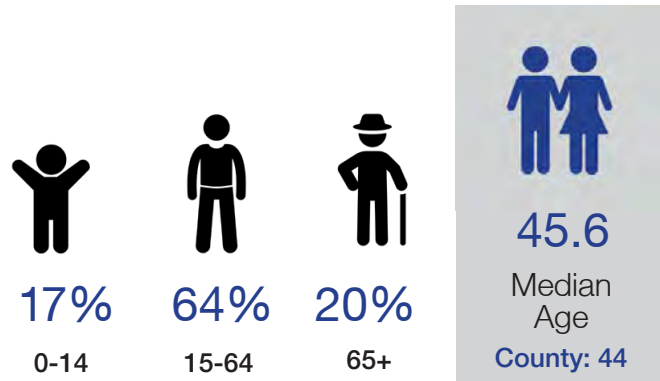
Demographics

Understanding the demographics of a community is vital to sound policy making and planning. Demographics inform the trends in population, aging, migration, local economies, and much more. Master Plans rely on demographic analysis to better prepare for the issues and demands facing a community in the present and the future. The demographic makeup of a community contains valuable information that effects the types of resources, programming, and physical infrastructure required to meet the needs of residents and businesses.

POPULATION GROWTH

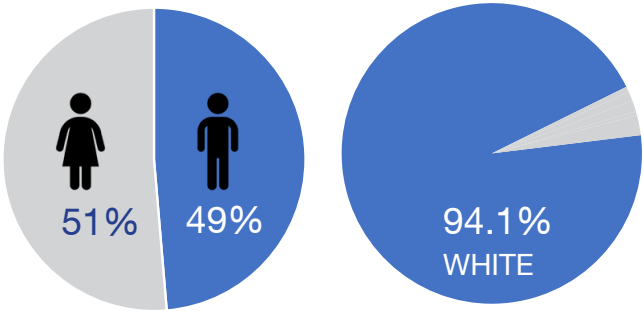


POPULATION AGE



Source: Bottom left corner

POPULATION GENDER & RACE



EDUCATIONAL ATTAINMENT

73.2%
COLLEGE GRADUATE

23.4%
HIGH SCHOOL



HOUSEHOLDS

8,174
TOTAL
HOUSEHOLDS

2.58
AVERAGE
HOUSEHOLD SIZE
COUNTY: 2.68

Population

Proper planning for the future must consider the composition of the population and consider its likely future composition. Understanding where the Township has been and where it is likely to go is essential to projecting future needs.

Population

In 2018, the Township has a total population of 20,186. The table below provides a summary of general population characteristics for the Township.

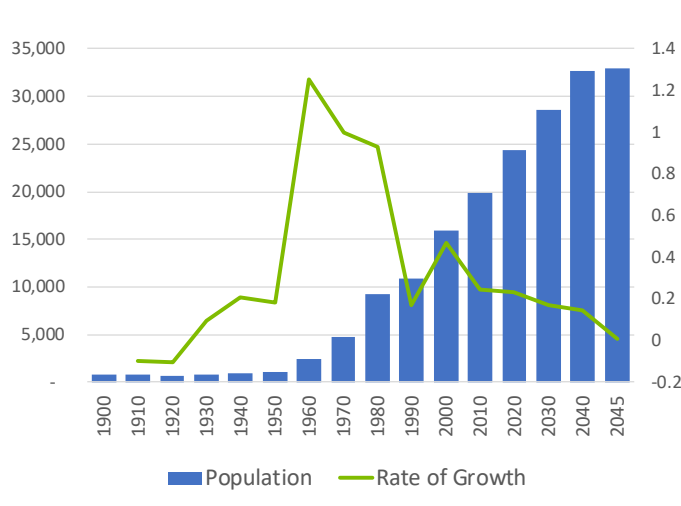
POPULATION FORECAST BY AGE	
Total Population	20,186
Median Age	45.6
Male	9,822 (49%)
Female	10,364 (51%)

Source Text: ACS 2018

Population Growth Rate

According to SEMCOG forecasts, the total population of the Township is naturally expected to increase by 61 percent by the year 2045. However, as shown in the graph below, the rate of population growth is projected to steadily decline from 2020. This decline usually happens with a higher death rate, lower birth rates, or higher migration rates.

FIG. 1.1. POPULATION GROWTH YEAR 2045

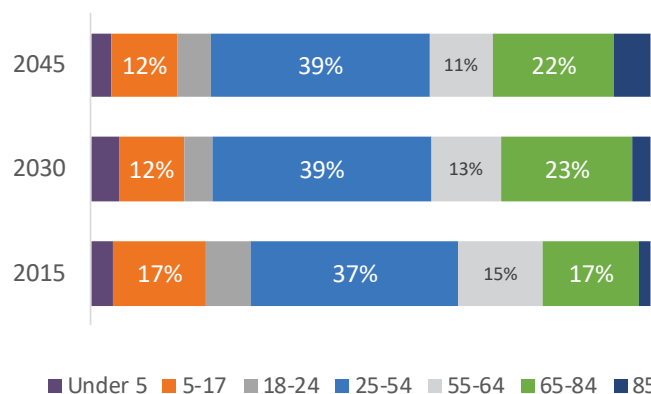


Source Text: SEMCOG Community Profiles

Population Forecast

The chart and the table provide information about the percent distribution of age groups in 2015 and projected data for the years 2030 and 2045. The percent distribution of different age groups in Genoa is fairly consistent between 2030 and 2045, even though the numbers indicate an alarming rise in the older adult population by 2045 (a 400% increase). The Township's largest population cohort are adults aged 35-59—people who are typically in the workforce and in their family-forming years (see Chart below). The percent share of older adults to the total population is projected for a 6 percent increase from 2015 to 2045. The Township should consider policies to accommodate the needs of aging adults within the community.

FIG.1.2. POPULATION DISTRIBUTION BY AGE (2015,2030, 2045)



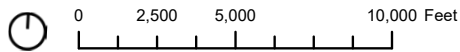
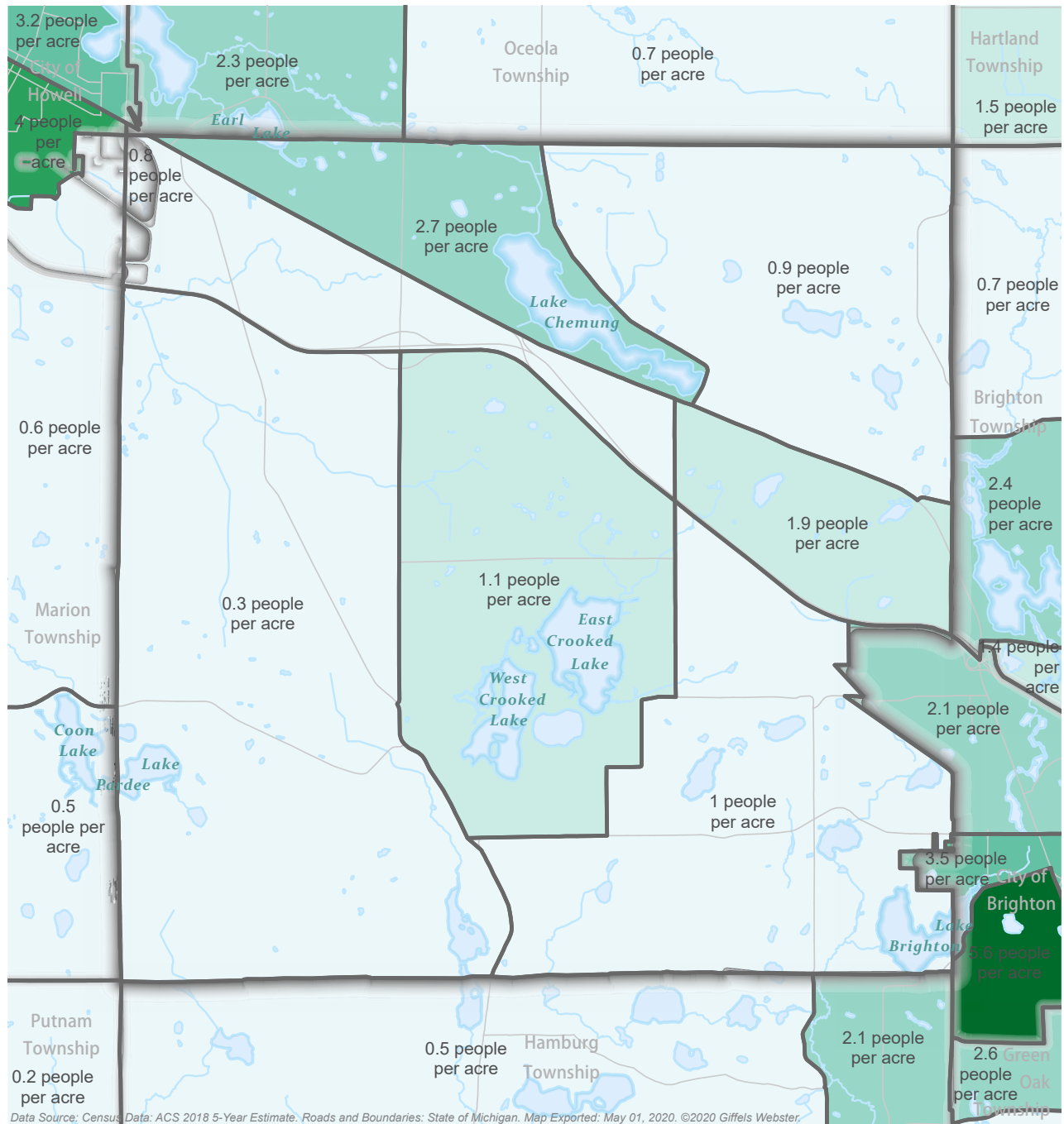
Source: SEMCOG Community Profiles

TABLE 1.1. POPULATION BY AGE

Age Group	2015	2030	2045	Percent Change 2015 - 45
Under 5	796	1,404	1,188	49.2%
5-17	3,391	3,312	3,867	14.0%
18-24	1,646	1,470	1,993	21.1%
25-54	7,571	11,149	12,859	69.8%
55-64	3,091	3,609	3,735	20.8%
65-84	3,499	6,692	7,146	104.2%
85+	422	914	2,119	402.1%
Total	20,416	28,550	32,907	61.2%

Source Text: SEMCOG Community Profiles

MAP 1.2. POPULATION DENSITY PER ACRE



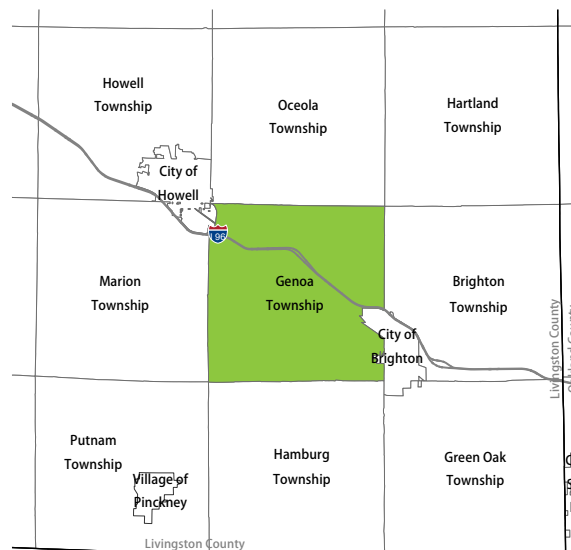
Surrounding Communities

The demographic composition of the Genoa Township incorporates data about race, age, housing, population trends, income, education, and employment. This section compares the Township's demographic characteristics to neighboring communities that share a border with Genoa.

Persons per Acre

The cities of Howell and Brighton have higher population density (persons/acre) in the County which is expected for an urban community. Genoa maintains a similar density compared to surrounding Townships. See the graph below for more details.

TABLE 1.2. SURROUNDING COMMUNITIES: POPULATION GROWTH (2000-2018)				
	Population 2018	Population 2010	Population 2000	Population Change (2000-2018)
Oceola Twp	13,991	11,936	8,362	67%
Howell	9,597	6,702	6,702	43%
Genoa Twp	20,186	19,821	15,866	27%
Livingston County	188,482	180,957	156,951	20%
Brighton	7,626	7,444	6,730	13%
Marion Twp	10,851	9,996	9,996	9%
Brighton Twp	18,570	17,791	17,673	5%
Hamburg Twp	21,602	21,165	21,165	2%



Source: SEMCOG Community Profiles

Population Growth

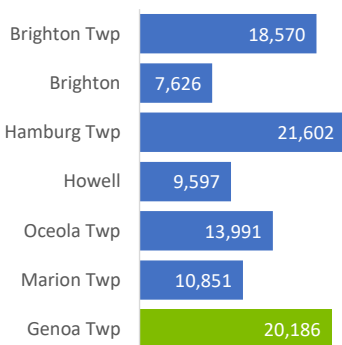
Many communities surrounding Genoa have been experiencing an increase in population since 2000. Oceola Township and the City of Howell have experienced the highest population growth between 2000 and 2018 followed by Genoa Township. However, Genoa Township has the largest population in the County after Hamburg Township.

Older and young adult population

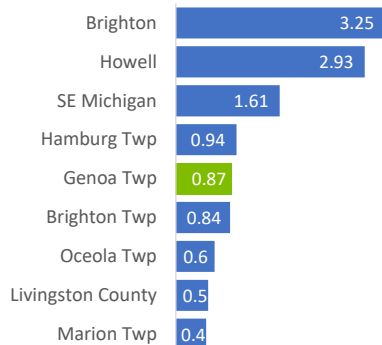
Compared to surrounding communities, Genoa Township has a higher percentage of the aging population over 65 years and a comparable percentage of the population of people between ages 5 to 16. This distribution essentially focuses on dependent people who are unlikely the primary breadwinners. This indicates that there is a larger share of people dependent on the working-age group on the Township.

FIG. 1.3. SURROUNDING COMMUNITIES: POPULATION, DENSITY, OLDER/YOUNG ADULTS

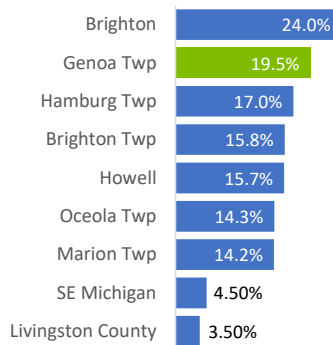
Total Population



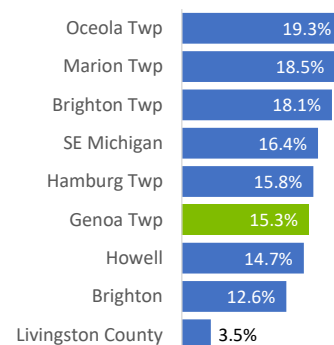
Persons/Acre



Percent 65 & more



Percent 5 to 17

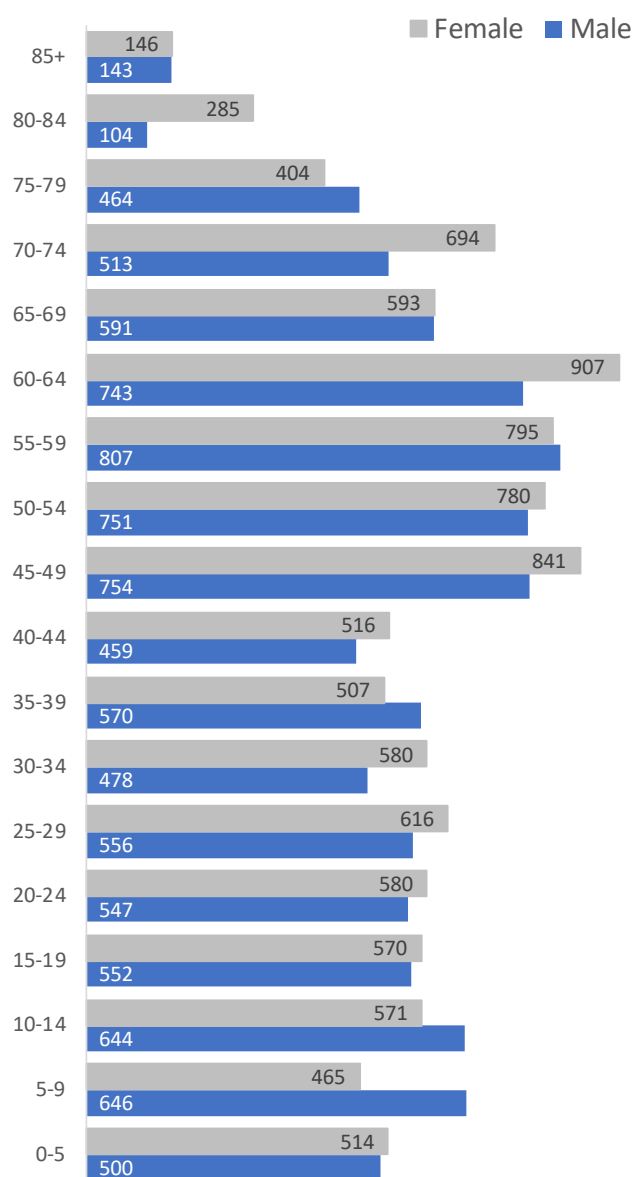


Source: SEMCOG Community Profiles

Population Cohort Analysis

It is essential to understand the population's composition by age and sex to have a proper insight into demographic conditions and socio-economic trends. Genoa has an almost equal distribution of male and female population on average. However, the ratio varies with age (see chart to the left). As they age, the ratio of females to males is increasing.

FIG.1.4. POPULATION DISTRIBUTION BY AGE AND SEX



Source: ACS 2018

Race

The racial composition in Genoa is predominantly white at 94.7%, Genoa's racial distribution is consistent with most of the surrounding communities except for the more diverse city of Howell.



94.4%
White

FIG. 1.5. RACE DISTRIBUTION: SURROUNDING COMMUNITIES

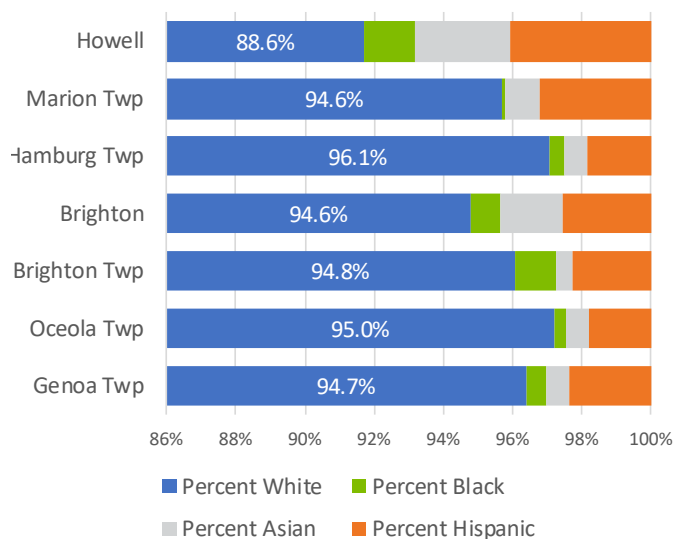


TABLE. 1.3. SURROUNDING COMMUNITIES

Race and Hispanic Origin	Census 2010	Percent of Pop-ulation 2010	ACS 2018	Percent of Pop-ulation 2018	Percent-age Point Change 2010-2018
Non-Hispanic	19,398	97.9%	19,716	97.7%	-0.2%
White	18,758	94.6%	19,120	94.7%	0.1%
Black	121	0.6%	114	0.6%	0.0%
Asian	203	1.0%	132	0.7%	-0.4%
Multi-Racial	231	1.2%	255	1.3%	0.1%
Other	85	0.4%	95	0.5%	0.0%
Hispanic	423	2.1%	470	2.3%	0.2%
Total	19,821	100.0%	20,186	100%	0.0%

Source: SEMCOG Community Explorer



Economy & Workforce

Economy & Workforce

Identifying trends in employment can help a community project future need for land for certain use categories and assess potential opportunities for economic development. This section provides a brief overview of the Township’s existing economic base. This plan also includes a market study that looks deeply at commercial demand and employment

WORKFORCE

TOP 5 INDUSTRIES (2020)

- 17% RETAIL
- 13% LEISURE&HOSPITALITY
- 13% INFORMATION & FINANCIAL ACTIVITIES
- 10% HEALTHCARE
- 9% CONSTRUCTION

INCOME



\$81,364
MEDIAN HOUSEHOLD INCOME
COUNTY: \$80,897



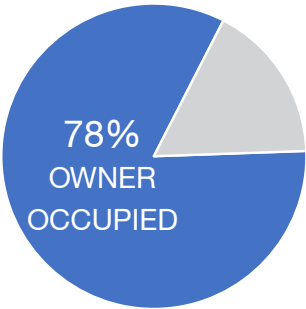
\$45,356
PER CAPITA INCOME
COUNTY: \$38,399



5.5%
POVERTY RATE
COUNTY: 5.6%

Source Text: Bottom left corner

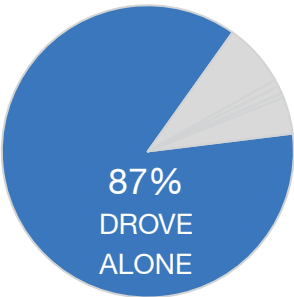
HOUSING



\$259,800
MEDIAN HOUSEHOLD VALUE
COUNTY: \$233,400

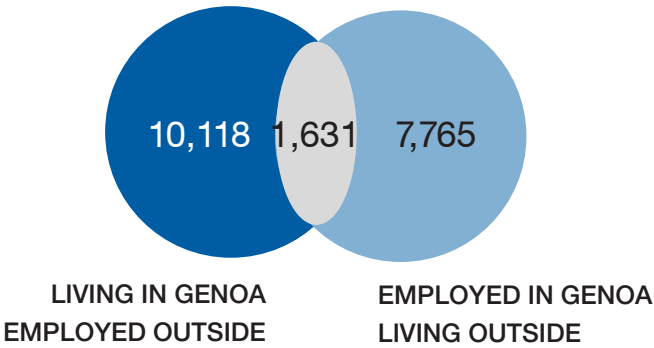
\$1,101
MEDIAN GROSS RENT
COUNTY: \$1,011

TRANSPORTATION



29.3
AVERAGE COMMUTE TIME IN MINUTES
COUNTY: 32.5

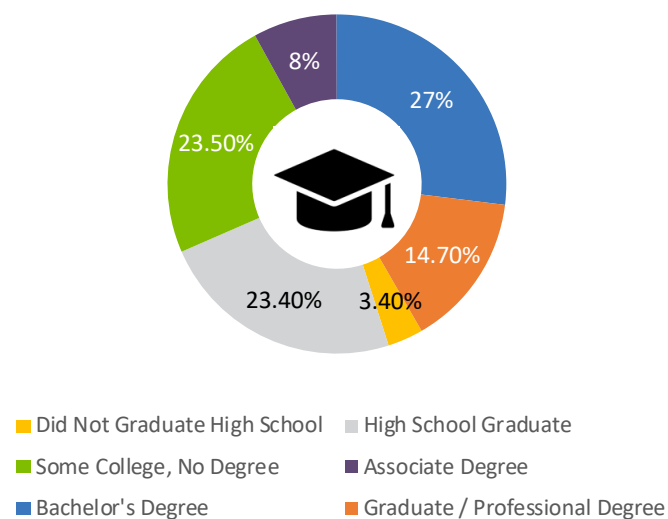
INFLOW-OUTFLOW



Educational Attainment

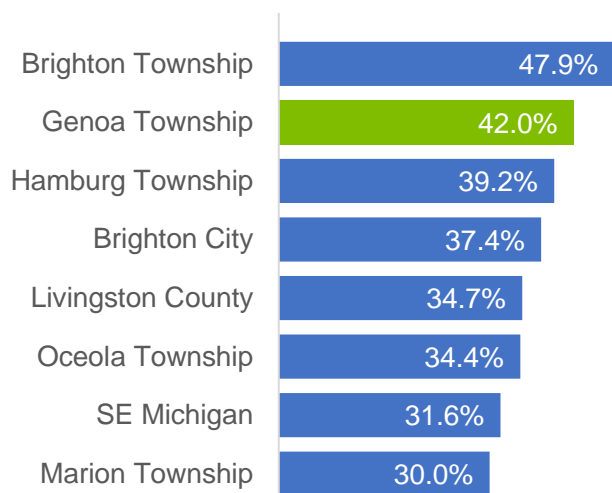
The highest levels of educational attainment result in a higher skill set and ultimately contribute to the local job growth. In general, about 73% of residents older than 25 years have some kind of associate or a higher degree past high school. Genoa has a higher percentage of bachelor degrees or higher graduates among the surrounding communities after Brighton Township.

FIG 1.6. EDUCATIONAL ATTAINMENT: GENOA



Source: SEMCOG Community Profiles

FIG. 1.8. PERCENT BACHELORS DEGREE OR HIGHER: SURROUNDING COMMUNITIES



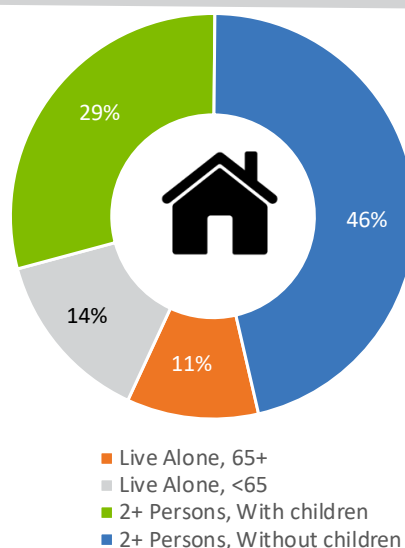
Source: SEMCOG Community Explorer

Households

In 2018, there are a total of 8,174 households in Genoa. A majority of the households are younger couples with no children (46%). A quarter of the households are families with children. The remaining quarter is split between younger and older adults who live alone. The average household size is consistent with surrounding suburban communities, between two and three persons per household.

FIG. 1.7. HOUSEHOLD COMPOSITION: GENOA

TOTAL HOUSEHOLDS: 8,174



Source: SEMCOG Community Profiles

TABLE 1.4. HOUSEHOLD COMPOSITION: SURROUNDING COMMUNITIES

	Average Household Size	Percent Households with Seniors	Percent Households with Children	Percent Households with Internet Access
Livingston	2.63	28.9%	31.0%	85.7%
Genoa Twp	2.47	33.1%	29.3%	90.8%
Oceola Twp	2.87	26.5%	37.8%	95.6%
Brighton Twp	2.79	27.9%	34.6%	94.8%
Brighton City	2.03	37.0%	19.3%	87.2%
Hamburg	2.58	30.9%	30.3%	93.7%
Marion Twp	2.89	27.9%	31.8%	90.8%
Howell City	2.12	24.9%	27.6%	81.1%

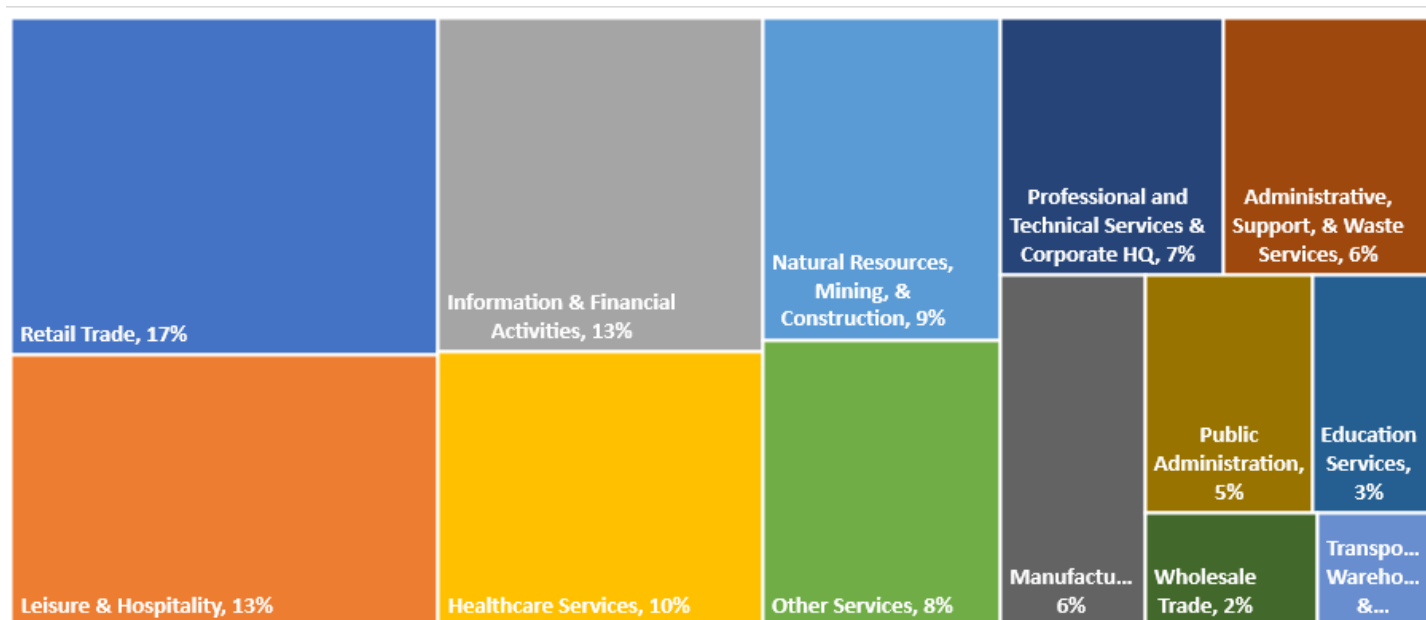
Source: SEMCOG Community Explorer



Workforce

In 2020, Genoa Township produced a total of 12,202 jobs. The chart below shows the distribution of employment sectors for the Township. There is no dominant sector that contributes majorly to the local economy, however, the retail and hospitality sectors make up 35% of the total workforce.

FIG. 1.9. WORKFORCE DISTRIBUTION IN GENOA, 2020



Source: SEMCOG Community Profiles

2040 SEMCOG Job Forecast by Sector

The percent contribution of each of these industries to the total employment within the Township is relatively identical since 2015 and is projected to remain the same with minimal variation in 2045. Refer to the table below for more details.

Overall, there is a slight growth in total number of jobs are projected from 2015 to 2045 by 12 percent. Manufacturing jobs are projected to decrease by 28% by 2045. Except for retail and manufacturing, the remaining three of the top five industries are projected to increase over 20% by 2045. Refer to the table and the chart in the next page for more details.

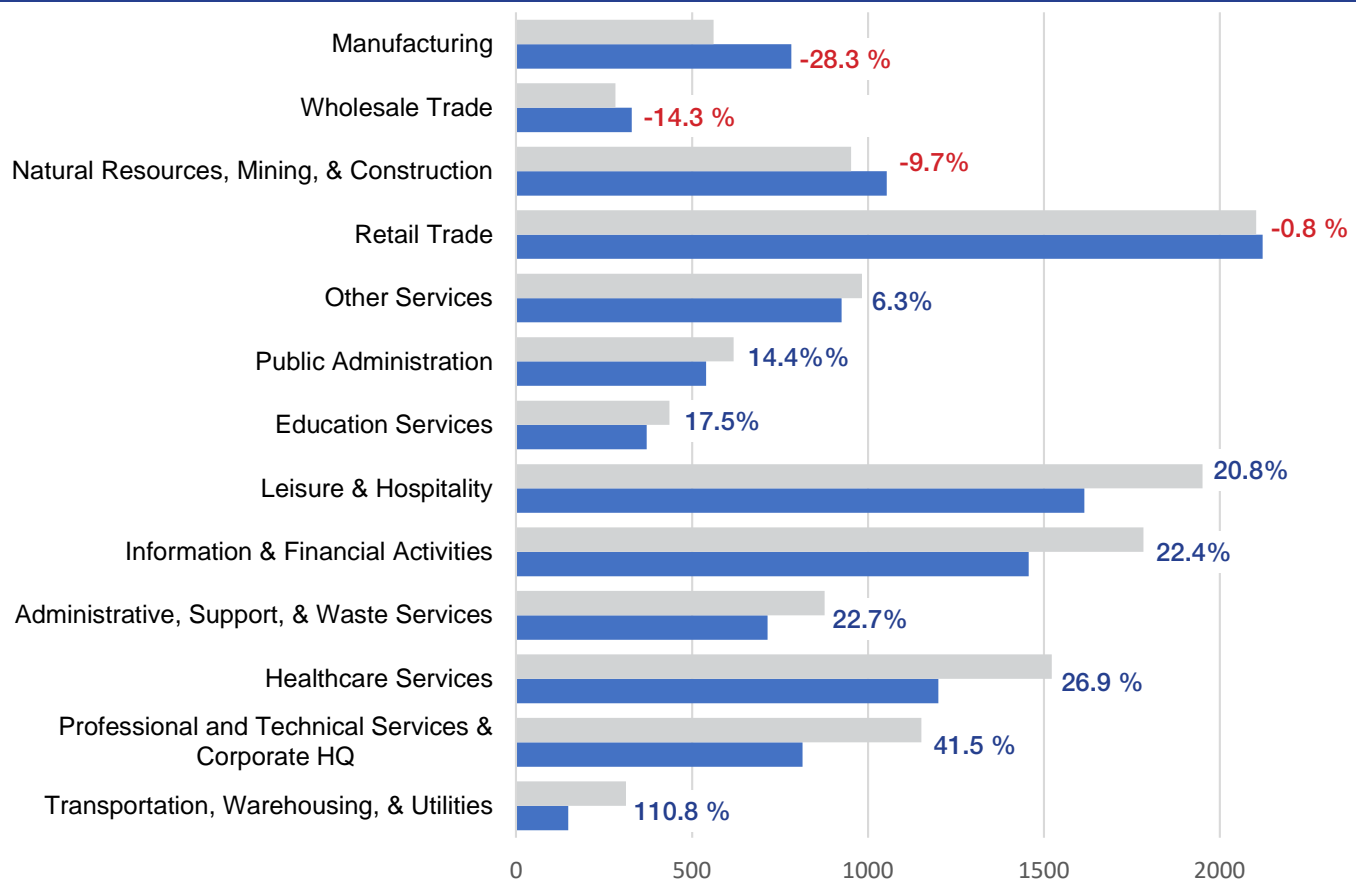
TABLE 1.5. TOP FIVE INDUSTRIES

Industry Sectors	% Contribution to Township workforce (2020)	Pct Change 2015-2045
Retail	17%	-0.8%
Leisure and Hospitality	13%	20.8%
Information & Financial Activities	13%	22.4%
Healthcare	10%	26.9%
Construction	9%	-9.7%

TABLE 1.6. DISTRIBUTION OF WORKFORCE BY INDUSTRY SECTOR (PAST, CURRENT AND FUTURE)

Industry Sector	2015	2020	2030	2040	2045	Change 2015-2045	Pct Change 2015-2045
Transportation, Warehousing, & Utilities	148	179	207	283	312	164	110.8%
Professional and Technical Services & Corporate HQ	814	808	932	1096	1152	338	41.5%
Healthcare Services	1,200	1261	1282	1455	1523	323	26.9%
Administrative, Support, & Waste Services	715	746	809	869	877	162	22.7%
Information & Financial Activities	1,457	1531	1608	1754	1783	326	22.4%
Leisure & Hospitality	1,615	1642	1772	1888	1951	336	20.8%
Education Services	371	393	406	424	436	65	17.5%
Public Administration	540	562	589	614	618	78	14.4%
Other Services	925	967	996	1000	983	58	6.3%
Retail Trade	2122	2032	1928	2177	2104	-18	-0.8%
Natural Resources, Mining, & Construction	1054	1086	993	963	952	-102	-9.7%
Wholesale Trade	329	276	264	280	282	-47	-14.3%
Manufacturing	782	719	621	584	561	-221	-28.3%
Total Employment Numbers	12072	12202	12407	13387	13534	1,462	12.10%

FIG.1.10. FORECAST: INDUSTRY SECTOR DISTRIBUTION IN 2045



Source: SEMCOG 2045 Regional Development Forecast

■ 2045 ■ 2015 % Change 2015-45



Workforce

The total number of jobs in the Township makes up 14% of the total jobs in the County. The Township's unemployment rate is higher than the County and the surrounding communities. However, the labor force participation rate at 66% is consistent with others and higher than the national average of 62.8%. A higher labor force participation rate and a lower unemployment rate indicate a successful local job market. These rates are impacted by demographic and economic trends. For example, adults aged 25-64, people who are typically in the workforce make up to 53% of the total Township population which explains the 66% labor participation rate. The percent share of this age group is projected to reduce to 50% in 2045.

TABLE 1.7. EMPLOYMENT WORKFORCE: SURROUNDING COMMUNITIES

	Total Jobs	Percent Unemployed	Labor Force Participation Rate
SE Michigan	2,774,223	6.9%	63%
Livingston County	85,073	4.2%	66%
Genoa Twp.	12,072	5.2%	66%
Brighton Twp.	10,791	3.3%	66%
Brighton	10,772	2.2%	60%
Howell	10,365	4.4%	60%
Hamburg Twp.	5,527	3.8%	67%
Oceola Twp.	2,202	3.1%	68%
Marion Twp.	2,017	3.3%	68%

Source: SEMCOG Community Profiles

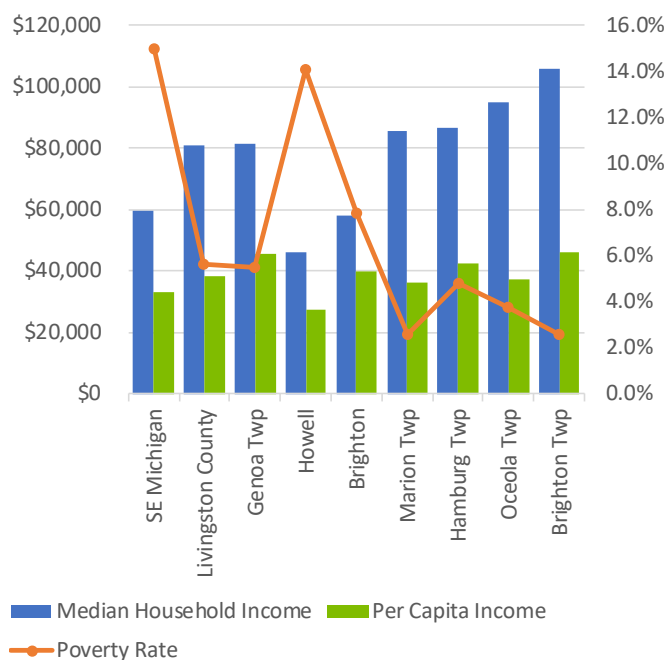
Income

Median household income and per capita income are typical metrics to determine the standard of living in a community. Genoa has a median household income of \$81,364, which is almost equal to the county median. The Township has an average household size of 2.58 which explains the per capita income at 45,356, 44 percent lower than the household income. The Township has a lower poverty rate than the surrounding cities, but comparable to surrounding suburban Townships.

TABLE 1.8. INCOME DATA: SURROUNDING COMMUNITIES

	Median Household Income	Poverty Rate	Per Capita Income
SE Michigan	\$59,494	\$33,125	15.0%
Livingston County	\$80,897	\$38,399	5.6%
Genoa Twp	\$81,364	\$45,356	5.5%
Howell	\$45,760	\$21,139	14.1%
Brighton	\$58,041	\$39,694	7.8%
Marion Twp	\$85,746	\$35,943	2.5%
Hamburg Twp	\$86,712	\$42,606	4.8%
Oceola Twp	\$95,071	\$37,329	3.7%
Brighton Twp	\$105,741	\$46,136	2.6%

FIG.1.11. INCOME TRENDS: SURROUNDING COMMUNITIES



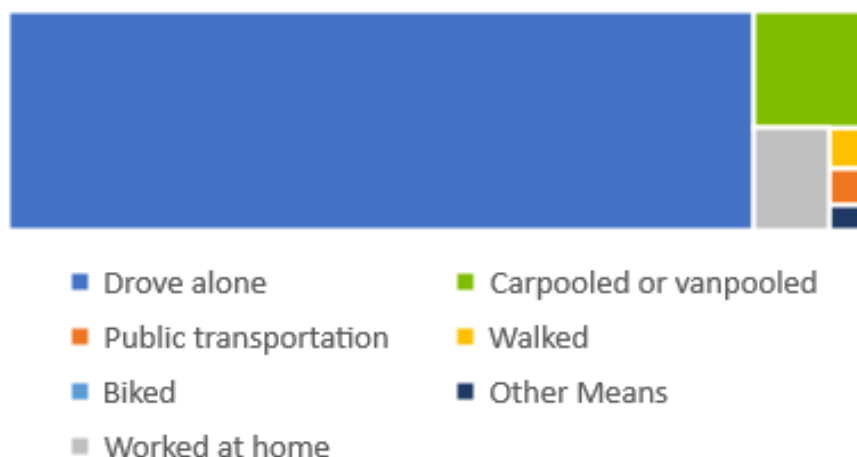
Source: SEMCOG Community Profiles

Transportation

Mode of Travel

In Genoa, the majority mode of travel to work is by car (approximately 87%) which is similar to national trends. This is followed by carpooling at 7%. The remaining modes of transportation are insignificant close to 1 percent each.

FIG.1.12. MODE OF TRAVEL: GENOA

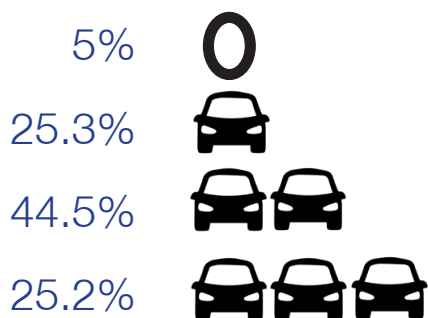


Source: SEMCOG Commuting Patterns

Car Ownership

In Genoa, there are a total of 8,174 households. A majority of households (70%) have two cars available. A small percent (3%) do not own any motor vehicle.

FIG. 1.13. CAR OWNERSHIP: GENOA

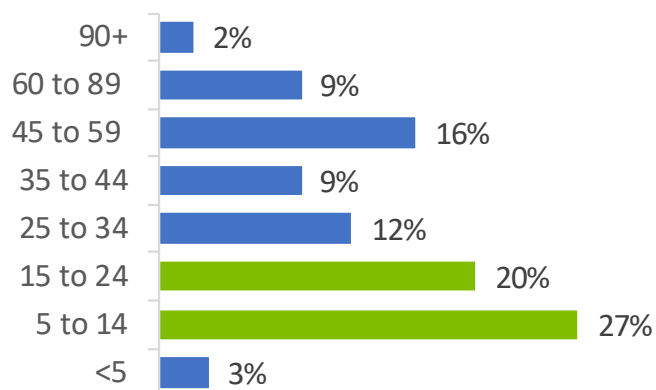


Percent distribution of number of vehicles owned in Genoa

Travel Times

In 2018, the mean travel time for Genoa residents is about 28.1 minutes, which is 165% less than the county mean (27) and United states (26.1). Research has indicated that the amount of time spent commuting impacts quality of life. Genoa residents generally have short commute times with 47% of the residents having commutes shorter than 24 minutes. About 25% of the residents travel longer than 45 minutes.

FIG.1.14. TRAVEL TIMES: GENOA



Source: SEMCOG Commuting Patterns

FIG.1.15. INFLOW-OUTFLOW COMMUTE PATTERNS: GENOA

Genoa Township experiences an decrease in its population during the daytime, as the number of workers that leave the Township for work is more than the number that come to the Township for work. Overall, the Township daytime population is about 12% greater than its permanent population. Brighton City and Ann Arbor are the most common places of employment for Genoa residents outside the city.



Community Facilities

Community Facilities

Community Center (Township Hall)

The Township owns approximately 72 acres containing Township Hall, featuring large open space areas, trails, parks, athletic fields, pavilions, sled hill, playground equipment, and wetlands. The surrounding land also provides the opportunity for other uses such as public open space, conservation and recreation. In addition, two sites located near Latson Road and Grand River Avenue were dedicated as open space. The Township is also seeking locations for future community parks, as detailed in the Parks and Recreation Plan.

Fire + Police

Genoa Township is serviced by the Brighton Area Fire Authority, which services a district that includes a population of 46,000 residents within Genoa Township, Brighton Township and the City of Brighton. There are five stations within the 74 square mile service district, two of which are located in Genoa Township. Station 34 is located on Dorr Road at I-96, directly adjacent to Township hall and Station 35 is located on Chilson Road on the west side of the Township. Genoa Township does not have its own police force and is instead covered by the Livingston County Sheriff's Department and the Michigan State Police.



Source: Giffels Webster, 2020



Utility Service Area

The availability of utilities has made a significant impact on development patterns. Most older developments use individual septic systems. A high density of septic systems in areas with unsuitable soils, high groundwater or near bodies of water can have significant impact on the quality of the Township's water resources. The septic tank leakage from older systems has most likely affected the quality of the Township's wells, lakes, wetlands, and groundwater and limits development potential.

In response to these problems, Genoa Township developed several public sanitary sewer systems for certain areas. The provision of sanitary sewer has helped to overcome some of the problems associated with septic tank systems. See Maps 1.5 and 1.6 for water and sewer coverage areas.

Northwest portion of Township

Genoa and Oceola Townships jointly developed a sanitary sewer system, known as the Genoa-Oceola sanitary sewer system, that serves much of the Township along Grand River Avenue from the area around Lake Chemung to the City of Howell, north of I-96. The treatment plant is located on Chilson Road, just north of the railroad.

The plant was designed to accommodate future development of vacant land within the presently defined service district. The system is designed to accommodate the Land Uses indicated in the Master Plan. Only sanitary wastewater is accepted at the wastewater treatment plant. No industrial process flows are permitted.

The Township also has a public water supply system along the Grand River Avenue. The system serves areas north of I-96 between Lake Edgewood and the western Township border. The water system was developed as part of MHOG Water Authority, a four Township system that includes Marion, Howell, Oceola and Genoa Township. There is a 500,000-gallon water tower located by Cleary University in Genoa Township.

Oak Pointe/Tri-Lakes

Sanitary sewer service was provided in the central portion of the Township around the Tri-Lakes area as a part of the Oak Pointe PUD. The treatment plant was constructed by the developer and dedicated to the Township. This system was combined with the Genoa-Oceola system with the Oak Pointe treatment plant being taken off-line and wastewater routed to the treatment plant on Chilson Road. The system serves the ultimate build-out of Oak Pointe, Northshore and the existing residential areas surrounding the Tri-Lakes. This system provided a benefit by not only serving the future development within the Oak Pointe PUD, but by also providing sanitary sewer service to the older lakefront subdivisions in the area.

This has had a significant benefit for the water quality within the Tri-Lakes. As part of the Oak Pointe PUD, a public water system was also developed. The system serves the Oak Pointe development and has been extended around to the north end of Crooked Lake to serve the Northshore PUD. The system has an Iron removal facility and a 150,000 gallon elevated storage tank in the Oak Pointe Golf Course. The Oak Pointe/Tri-Lakes systems are at capacity and only infill/redevelopment are able to be accommodated

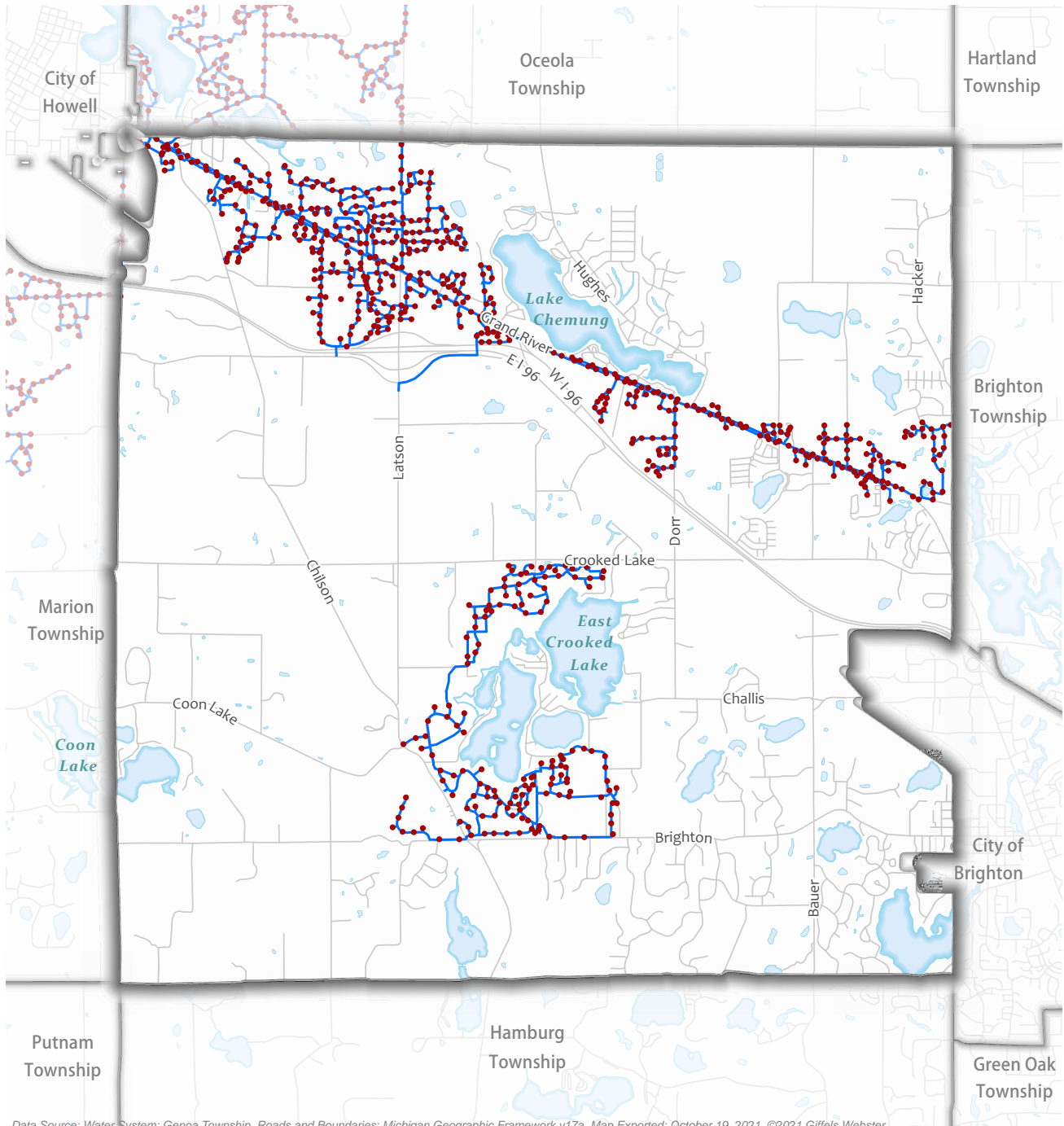
Brighton

The Pine Creek PUD, adjacent to the City of Brighton, has public water and sanitary sewer service through a P.A. 425 agreement with the City. Water has also been extended to serve existing homes that had contamination problems with individual wells. There are currently no plans to extend Brighton water and sanitary sewer service to other areas of the Township. There is also a public water supply system at the eastern edge of the Township. This system was originally developed to serve the Lake Edgewood condominium development and the Brighton Village Mobile home park. This system has been extended southward along Grand River Avenue to the City of Brighton. This extension serves commercial development along Grand River Avenue near the Brighton I-96 interchange. There is a 500,000-gallon water tower on Conference Center Drive, adjacent to I-96. This water system is owned and operated by the City of Brighton.

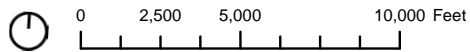
Lake Edgewood

Sanitary sewers are provided in the eastern section of the Township, through a system known as the Lake Edgewood sanitary sewer system. The system serves the greater area along the eastern portion of the Grand River Avenue corridor, west to Sylvan Glen. The Sylvan Glen manufactured housing park is served by a private on-site package treatment plant, which ultimately will be connected to the Lake Edgewood system.

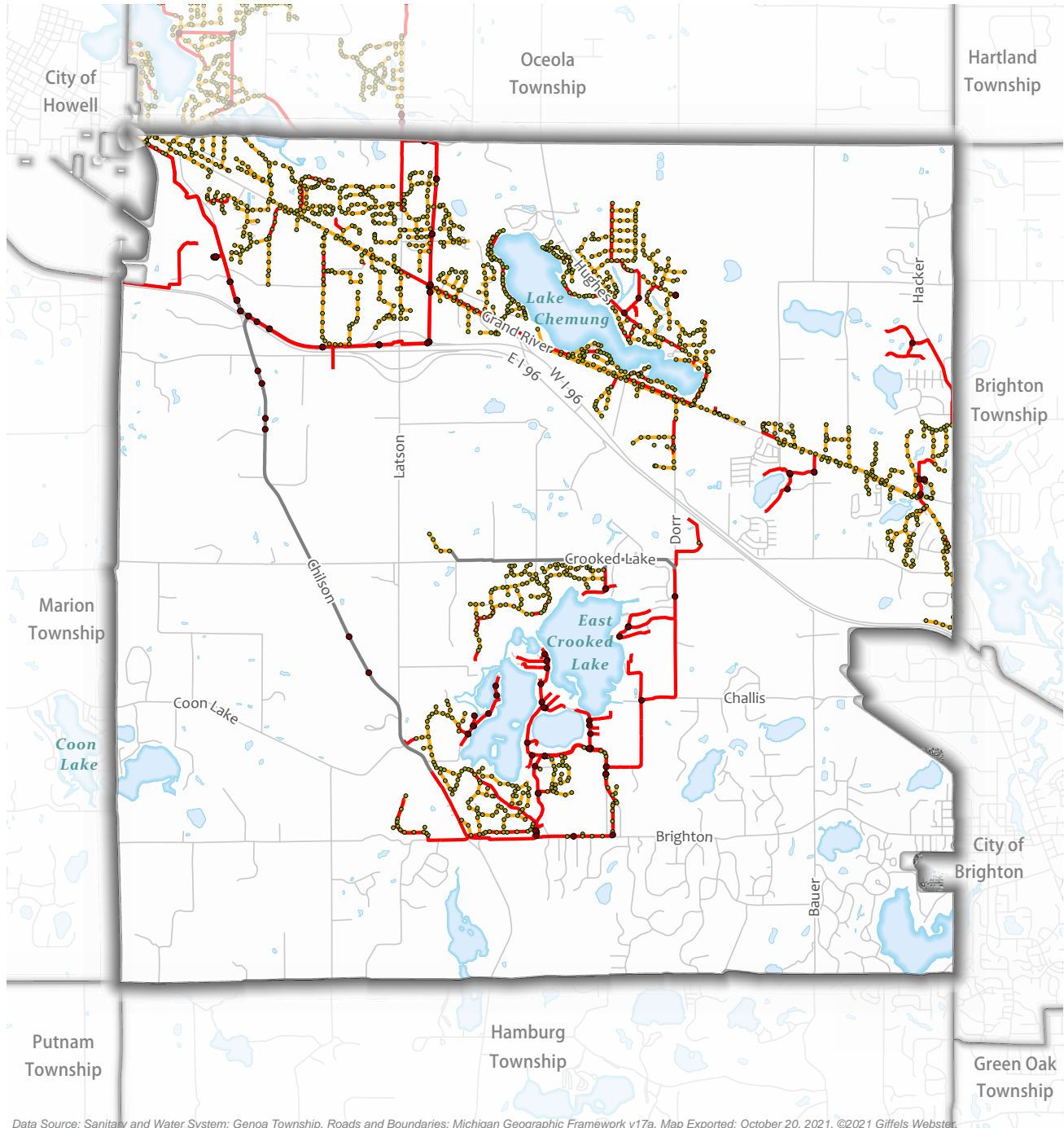
MAP 1.3. WATER SYSTEM



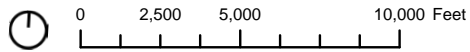
Data Source: Water System: Genoa Township. Roads and Boundaries: Michigan Geographic Framework v17a. Map Exported: October 19, 2021. ©2021 Giffels Webster.



- Hydrant
- Water Main



Data Source: Sanitary and Water System: Genoa Township. Roads and Boundaries: Michigan Geographic Framework v17a. Map Exported: October 20, 2021. ©2021 Giffels Webster



- Sanitary Valves
- Manholes
- Gravity Main
- Force Main
- Transmission Main- Not Operational

Transportation

Roadway Functional Classification

Function, efficiency and safety of roadway movement in Genoa Township can be furthered through the establishment of a classification of roads and planning and designing these facilities for their specific purpose. A functional system or hierarchy of roads provides for movement of traffic as well as access to specific sites. This hierarchy will range from major arterials such as Grand River Avenue, which primarily serves for cross-town movement, to local subdivision streets which serve to access individual homes. See Map 1.7.

This system defines the roles of each street, in terms of operational requirements; which is in turn translated into planning, management and physical design features.

- **Expressway:** I-96 serves as the principal route between the residential population of Genoa Township and major activity centers throughout the region.
- **Major Arterial:** The Grand River Avenue Corridor is the major roadway through Genoa Township. This roadway serves a vital function towards connecting the Township with the adjacent cities of Brighton and Howell. Because of the amount of traffic on Grand River Avenue, commercial uses have developed along this corridor.
- **Minor Arterial:** There are a number of roadways which move traffic throughout the Township and provide connections with other adjacent communities including Brighton Rd., Chilson Rd., and Latson Rd. These roadways also provide access from other areas of Genoa Township to Grand River Avenue. These roadways serve for longer trips within the Genoa Township and adjacent communities. Like Grand River Avenue, the primary function of these roads is to move traffic. Access to these roads must be managed in order to maintain safe and effective movement.

- **Collector:** The collectors serve to assemble traffic from local subdivision streets of residential neighborhoods and deliver it to the arterial. Collectors will also serve to provide access to abutting properties. Many individual subdivisions will contain one or more collector streets which funnel traffic from the local streets and connects with adjacent neighborhoods.
- **Local Road:** Local streets serve primarily to provide access to property and homes. These roadways are generally short and discontinuous, and generally only provide connection to one or two collector streets.

Constraints

Several natural and fiscal constraints impact the development and efficiency of Genoa Township's public roadway network. In a featureless environment, where no financial hindrances to development are present, the roadway system will most likely resemble a grid system, much like that which has developed in many Midwestern communities. Genoa, however, is not a featureless environment, nor does it benefit from infinite resources.

As such, the following considerations must be examined to plan, prioritize and program the Township's transportation system:

- I-96 limited access freeway;
- Water bodies;
- Wetlands;
- Topography;
- Rights-of-way;
- Financing availability; and
- Cost effectiveness of proposed improvements

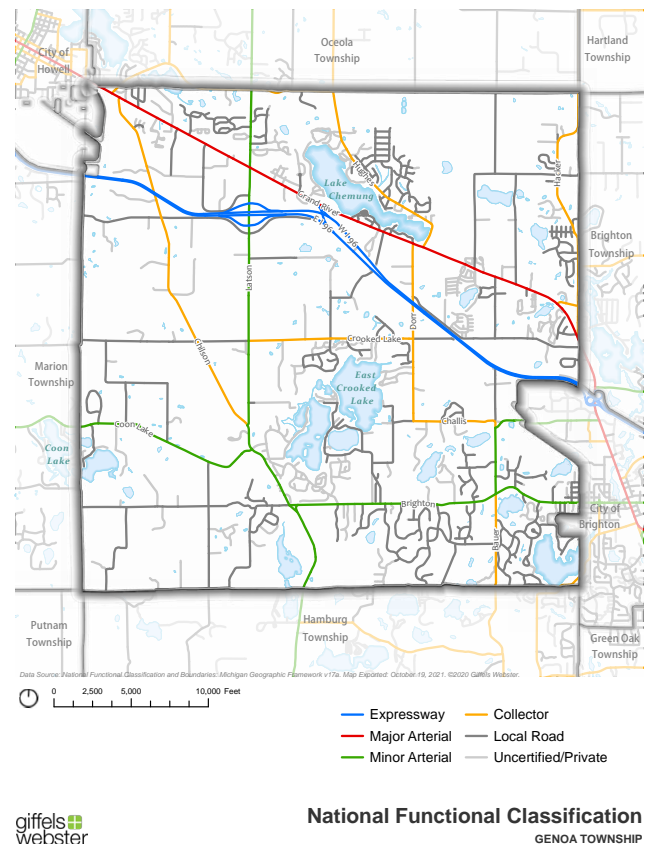
Roadway Capacity and Volume

Livingston County's 2001 Transportation and Land Use Plan included a brief discussion on road volume and efficiency. It was noted that the efficiency by which an area's circulation system operates is typically measured by the degree to which motorists are delayed in their travel. Future traffic operations are analyzed by comparing projected traffic volumes to the capacity of the road network.

Capacity refers to the number of vehicles that can travel through an intersection or segment of roadway during a specified time period. Generally, roadway operations and capacity are analyzed during peak hours of traffic. A graduated scale of "A" through "F" is used by transportation engineers to describe the general flow of traffic (also known as Level of Service, or LOS) for a specific roadway segment. Typically, an LOS of "C" or better is considered acceptable. An LOS of "E" or "F" represents a roadway with long, inconvenient delays.

Roadway capacity is dependent on several factors: pavement condition and material, roadway width and number of lanes, topography, roadway design setting, the location and frequency of curb cuts, speed limits and other traffic controls, sight distance limitations, and intersection designs.

Genoa Township may wish to meet with the Livingston County Road Commission to better understand how their data concerning traffic volume counts (or vehicle "trips") for county primary and local roads, translates into observed levels of service. This will help both the Township and road agency better plan for future development, as well as help residents understand how travel on their local roadways may change in the future.



Natural Features

Natural Features

Genoa Township is fortunate to have abundant natural resources, including lakes, open spaces, woodlands, and wetlands. These natural resources make up a local ecosystem that includes wildlife habitat and important components that contribute to clean water and air. The presence of these natural features add to the quality of life for Genoa Township residents, who benefit from not only their aesthetic beauty, but also from opportunities for active and passive recreation. With ongoing residential, commercial, and industrial development occurring in the Township over the past 20-plus years, there is a need to be proactive in the preservation of these natural features.

Soils, topography, woodlands, rivers, lakes, creeks, wetlands, and floodplains have a direct relationship with the Land Use in Genoa Township. Each type of Land Use is influenced by the Township's natural features. In the Master Planning process, the optimum arrangement of Land Uses should maintain the Township's natural resources and physical features for future generations, while balancing the needs of the community for housing and businesses.

The following is an overview of some of the major natural features that are prevalent throughout the Township. As development occurs, the following features should be considered in addition to other site-specific conditions that may be pertinent to each individual location.

Geology

Since the last ice age (about 12,000 years ago), the soils in Genoa Township have formed as a result of a number of soil forming factors. These include water drainage, wind, slopes, climate, biological activity and human activity. The soils and geology in the Township are characteristic of glacially formed landscapes consisting mainly of moraines (hills of glacially deposited sands and gravel) and till plains (mixed soil materials deposited by glacier advance and retreats). These soil types can include a range of rock sizes from gravel to fine sand and may also include fine clay and silts. The underlying bedrock is a grey shale known as the Coldwater Formation.

Topography

As noted in the previous Master Plan, there are areas of significant topography in the southern and eastern portions of the Township that may present constraints to development. Development in areas with steep slopes may result in a significant change in the natural functions of the hillside, whether by mechanical cuts and fills or the removal of natural vegetation. If drainage flows are altered, erosion can occur, causing further instability and sedimentation in waterways.

To protect against erosion, there should be proactive site planning prior to development that continues through construction. Care should be taken to ensure that grading is minimized and vegetation, and top soil are protected.

Soils

Genoa Township was historically a resort and farming community. Over the years, much of the farmland has been converted to residential, commercial and industrial uses. There is still active farmland in the northeast corner of the Township and in the western portion of the Township. The prime farmland is in the northern portion of the Township.

Construction costs and risks to the environment can be minimized by developing areas with suitable soils. Poor soils present problems such as poor foundation stability and septic limitations.

Drainage

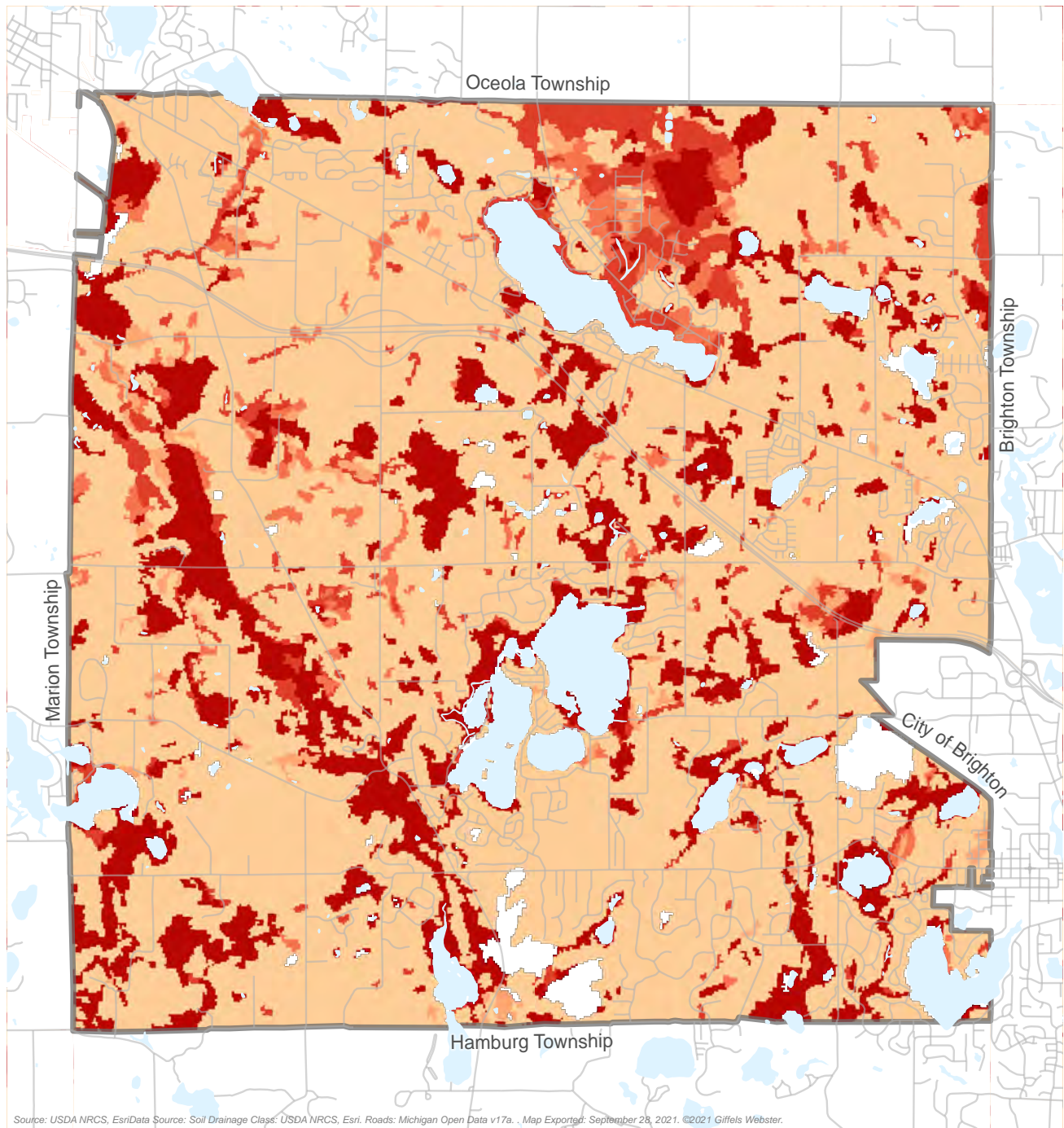
Development on poorly drained soils increases development costs, maintenance costs, and will lead to sanitary problems. Development costs are increased due to additional foundation, road and septic preparation. Maintenance costs and problems will be associated with septic field failures, flooded basements and impact to roads from frost action. Map 1.9 illustrates draining for soils, which range from “excessively drained,” where water is removed very rapidly, to “sub-aqueous,” which are soils under a body of water (there are only a few of these areas). Soils in the Township are generally considered “moderately well drained,” where soils are only wet for a short time. Along water courses, some less well-drained soils exist.

Foundation Stability

Soil areas that do not provide stable foundations may experience shifting building foundations, cracked walls and cracked pavement and roadways. These problems often result in increased development and maintenance costs or, in extreme cases, structural failure.

Septic Suitability

Because there are many areas of Genoa Township that rely on individual septic systems, the location of septic systems on proper soils is extremely important. Inspection and approval for use of a septic system is under Livingston County's jurisdiction and ultimately their responsibility to maintain high standards of review to prevent system complications or failures. Septic field failures are often the result of poor soil permeability, high water table or excessive slope. Soils such as compacted clays and silts will not allow wastewater to percolate, a high water table prohibits adequate filtering and excessive slope does not provide adequate percolation.



0 2,000 4,000 8,000 Feet

Excessively Drained	Somewhat Poorly Drained
Somewhat Excessively Drained	Poorly Drained
Well Drained	Very Poorly Drained
Moderately Well Drained	Subaqueous

Tree Canopy

Wooded areas can be found throughout the Township. Wooded areas also serve significant environmental functions that need to be acknowledged. These functions include watershed protection, air quality protection, noise abatement, and weather protection.

Watershed Protection.

A wooded area can be of great value to a watershed area. The canopy of trees aid in breaking the force of precipitation, thereby decreasing erosion, which is further inhibited by the fibrous root system of the understory plants. Woodlands can also reduce the volume of stormwater runoff, which helps reduce flooding. In addition, precipitation is retained and recharged into groundwater reserves by the woodland.

Air Quality Protection.

Woodlands improve air quality and afford protection from wind and dust. Leaves and branches moderate the strength of winds and, when moistened with dew or rainwater, reduce suspended particles in the air, which are later washed off with rainwater. Plants also serve to moderate the effect of chemical pollutants in the air by absorbing some ozone, carbon dioxide, and sulfur dioxide.

Noise Abatement.

A dense stand of trees can significantly cut noise from adjacent factories or highways by six to eight decibels per 100 feet of forest. Moreover, the moderating effects of forests on temperature and wind can significantly cut the sound-carrying capacity of the atmosphere.

Weather Protection.

The resilience of woodlands creates a micro-climate around the tree stand itself. Woodland qualities, which moderate and buffer temperature, precipitation, runoff, wind, and noise, are features of this micro-climate effect. The benefits of this micro-climate effect to surrounding urban and suburban areas can be significant.

An urban area devoid of vegetation is the exact opposite of the forest micro-climate. It increases the range of temperature fluctuations much like the climatic extremes of a desert. The sun's energy striking streets and buildings is changed into

heat, further increasing the temperature on a hot day; at night, the buildings lose heat and offer no protective cover from night chill or winter winds. Thus, if woodlands are interspersed among built-up areas, the effects of their micro-climates can be felt in adjacent urban areas, moderating fluctuations in temperatures by keeping the surrounding air cooler in the summer and daytime and warmer in the winter and evening.

Wildlife habitat.

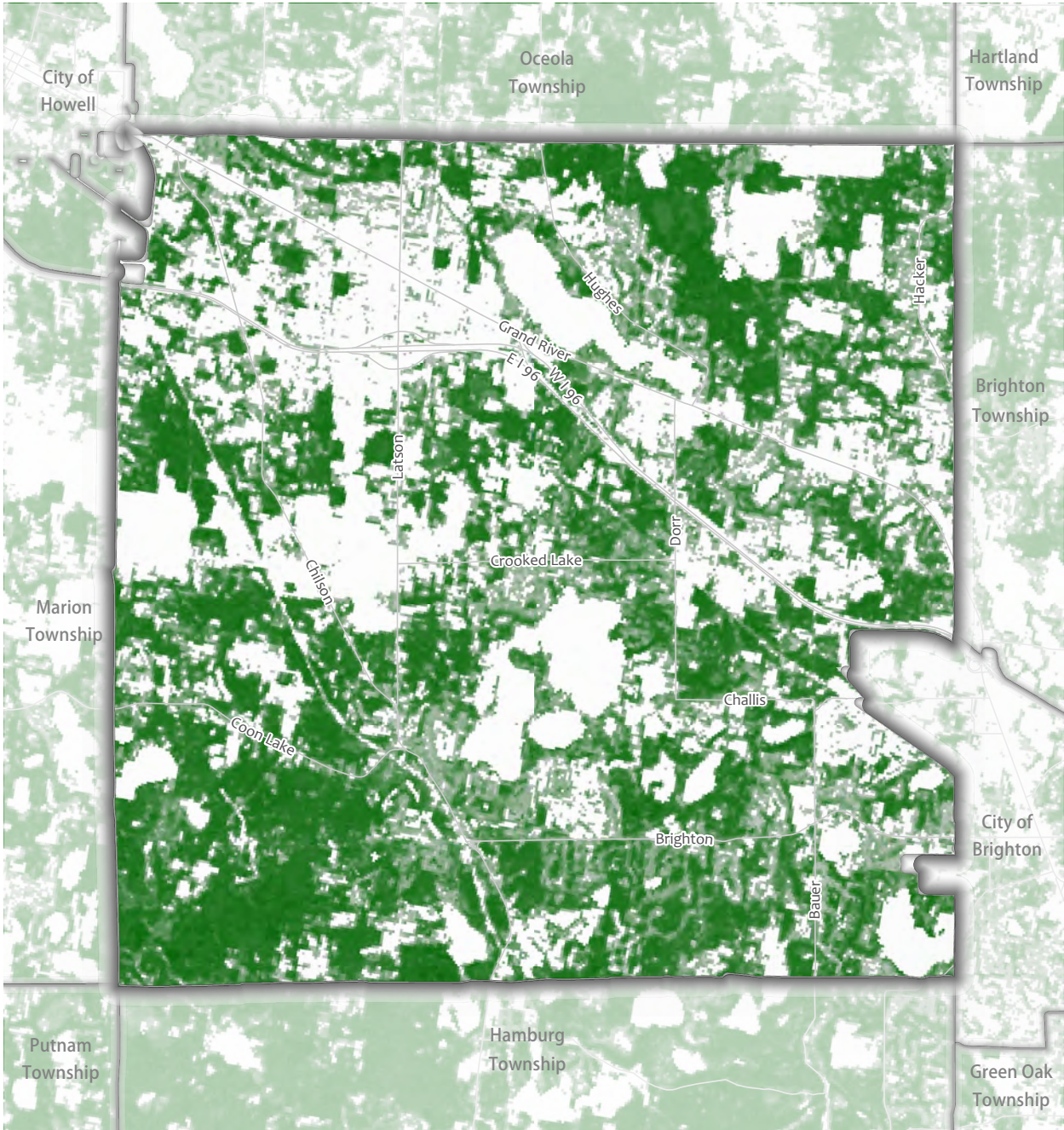
Woodlands provide essential shelter and food for deer, raccoon, rabbits, pheasants and other birds and animals. The opportunity to observe wildlife in a natural setting has educational benefits for Township residents.

Township's natural character.

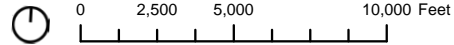
There is a significant amount of mature vegetation along many of the road corridors that pass through the Township. Woodlands located near the roadway contribute to a natural/rural atmosphere in a number of ways. The impact of vegetation on the motorist will be greater because of the close proximity to the roadway. A greater mass of vegetation will be within the forward view of the motorist. Other features such as buildings will have a less dominant impact on the streetscape because they fall behind the vegetative foreground. Taller trees will provide a sense of enclosure, providing a defined space bounded by vegetation. There is also a significant amount of vegetation along most lakes and streams throughout the area.

The Township currently protects woodlands through provisions in the Zoning Ordinance that restrict clearing of woodlands on a site prior to site plan approval. During site plan review, woodlands are required to be inventoried and the design is required to demonstrate preservation of natural features. As a condition of site plan approval, trees are required to be protected during construction with root-zone fencing. The Township also has landscaping regulations that require the planting of greenbelts and street trees for any new development. Landscape materials used should be native to Michigan and a variety of species should be used for street trees to minimize the impact of disease.

MAP 1.7. TREE CANOPY



Data Source: Tree Density National Land Cover Data. Roads: Michigan Open Data v17a. Map Exported: October 07, 2021. ©2021 Giffels Webster.



Total Tree Canopy Density of Sylvan Lake: 37.1%



TREE CANOPY
GENOA TOWNSHIP

Wetlands

Wetlands serve a variety of important functions which not only benefit the natural environment but also the community. Some of the primary values which wetlands contribute are as follows:

- Mitigate flooding by detaining surface runoff.
- Control soil erosion and sedimentation loading in rivers and lakes.
- Provide links with groundwater.
- Improve water quality which is degraded by such things as:
 - o Nutrients and chemicals from fertilizers and pesticides used in agriculture and landscaping/lawn care;
 - o Polluted urban run off from roads, parking lots, industrial and other commercial activities;
 - o Treated effluent from waste water treatment facilities;
 - o Erosion and sedimentation resulting from agricultural and construction activities.
- Function as highly productive ecosystems in terms of wildlife habitat and vegetation. Serve a variety of aesthetic and recreational functions.

The largest interconnected series of wetlands are located along the Chilson Creek corridor in the western portion of the Township. There are also numerous kettle depressions scattered throughout the Township. (See Map 4)

Types of Wetlands

There are four types of wetlands predominate within the boundaries of Genoa Township:

1. (Emergent wetlands with rooted cattails, bulrushes and sedge grasses;
2. Scrub/shrub wetlands,
3. Bogs; and
4. Forested wetlands with an over-story of trees and an under-story of shrubs.

As water levels rise and fall from year to year, some ecological succession may be occurring as the wetlands shift from emergent marsh to forested wetlands.

Development

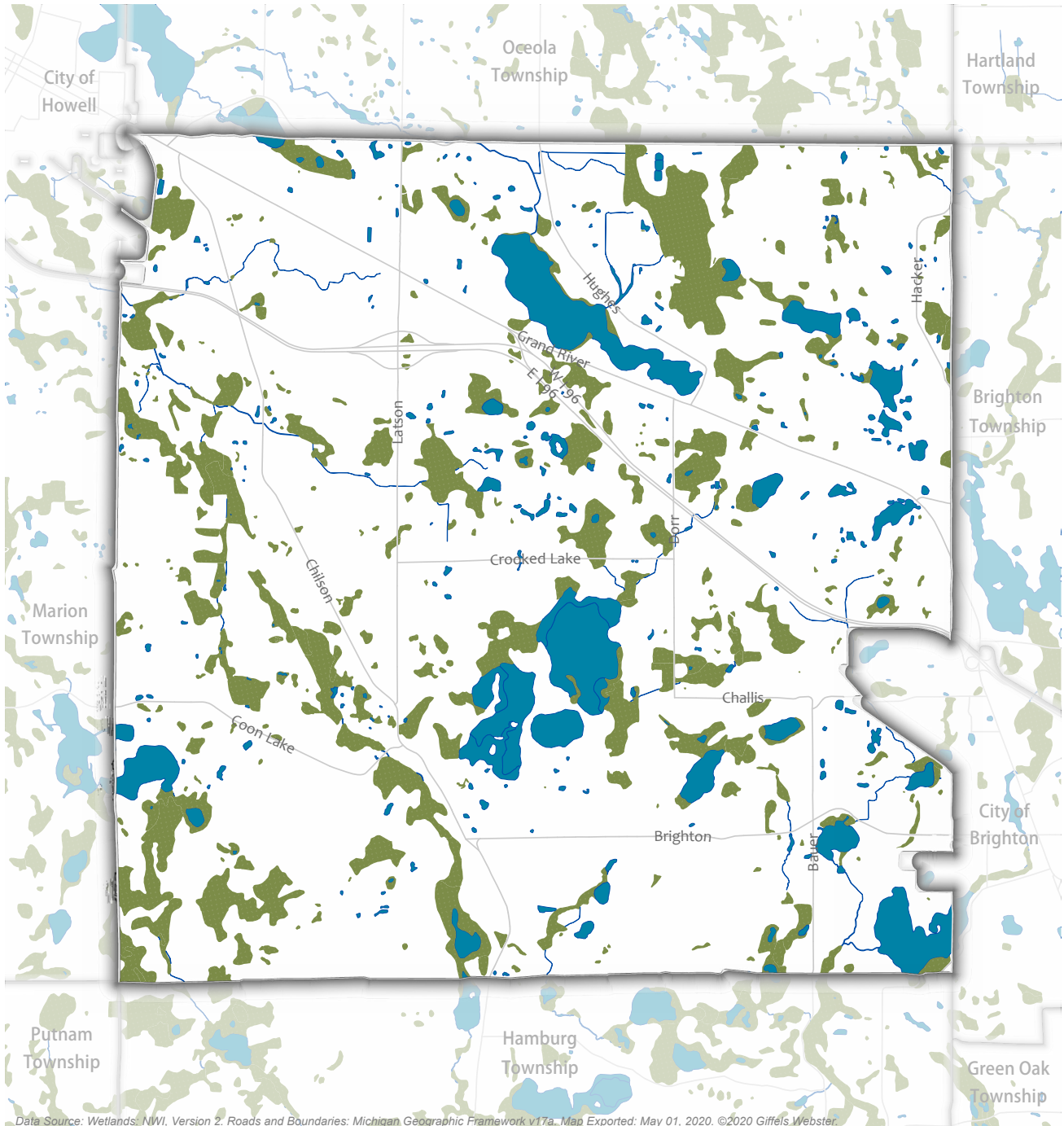
Future development in areas surrounding these wetlands could significantly impact wetland resources. Therefore, developers and Township officials should evaluate alternative designs to minimize any potential for impact. This is best done by initially considering wetland resources as constraints to development. The relative weight of these constraints must also account for other environmental and socio-economic constraints. Minimization of impacts to these resources should take into account the cost of avoidance and the property rights of the individual. If impact is unavoidable, then mitigation should include an analysis of retaining or enhancing the wetland values to be lost.

Wetland areas are valuable as natural buffers between residential and commercial Land Uses. They contribute significantly to the aesthetic character of the community. By incorporating wetlands as part of the future development, they will continue to maintain open and green space as well as contribute to retaining the rural setting.

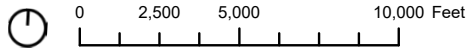
Wetland Regulation

Any wetlands greater than five acres in size or contiguous with a waterway are regulated by the Michigan Department of Environment, Great Lakes and Energy (EGLE) through the Goemaere-Anderson Wetland Protection Act, Public Act 203, as amended. Any activity which requires these regulated wetlands be filled or drained requires a permit from EGLE. Permits will generally not be granted unless the issuance is in the public interest and necessary to realize the benefits derived from the activity. If a wetland fill permit is granted, mitigation should be required such as creating new wetlands within the same drainage way or enhancement of existing wetlands. In addition to this, Genoa Township Zoning Ordinance contains wetland standards that are stricter than the state in order to save wetlands over 2 acres plus a natural/undisturbed buffers adjacent to any regulated wetland.

MAP 1.8. WETLANDS



Data Source: Wetlands: NWI, Version 2. Roads and Boundaries: Michigan Geographic Framework v17a. Map Exported: May 01, 2020. ©2020 Giffels Webster.



Wetlands
Surface Water

Lakes, Rivers and Streams

Lakes are among the Township's most valuable natural resources of the community. The largest and most significant lakes in the Township are Lake Chemung, East Crooked Lake and West Crooked Lake. The numerous lakes provide recreational opportunities such as boating, fishing and swimming. The quality of these water features enhances the value of adjacent property for residential opportunities. Areas surrounding many of the larger lakes in the Township have been developed for smaller lot resort and residential uses. These areas were initially developed with resort cottages on small lots with individual septic drain fields. Over time these areas have been converted to year-round homes.

Areas surrounding the lakes have soil conditions that are not well suited for drain fields due to poor soil texture and a high water table. The combination of the natural soil characteristics and increased residential use of the lake areas may lead to significant problems with septic tank systems. The septic tank leakage began affecting the quality of wells and the lakes. In response to these problems, Genoa Township has provided sanitary sewer to serve the most intensely developed areas around Lake Chemung and the Tri-Lakes.

Chilson Creek is the major stream in the Township that flows from the north down to the Huron River in Hamburg Township in the south. Ore Creek in the southeastern corner of the Township, near the city of Brighton also drains to the Huron River in the south. Associated with the creeks are corridors of adjacent wetlands. The creeks and wetlands are important for surface drainage, groundwater recharge and wildlife habitat. Alteration of the creeks and wetlands can contribute to flooding, poor water quality, insufficient water supply and loss of valuable wildlife habitat.

County Drains and Districts

The Township is part of eight drainage Special Assessment Districts (SAD), a majority of those are private. The County Drains for Marion & Genoa, and Genoa & Oceola are the largest drains. Refer to next page for location of these drains. For more information, please refer to <https://www.livgov.com/drain/Pages/county-drains.aspx>.

Marion Genoa Drain

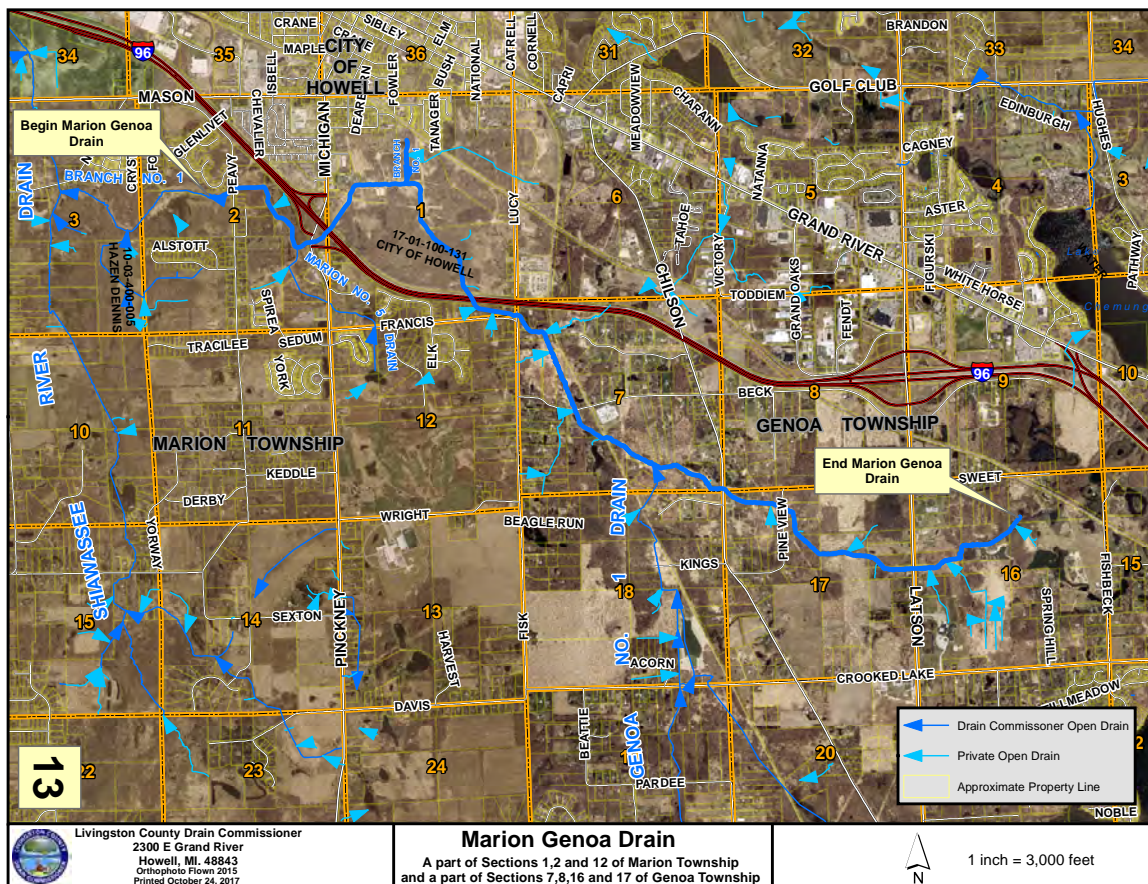
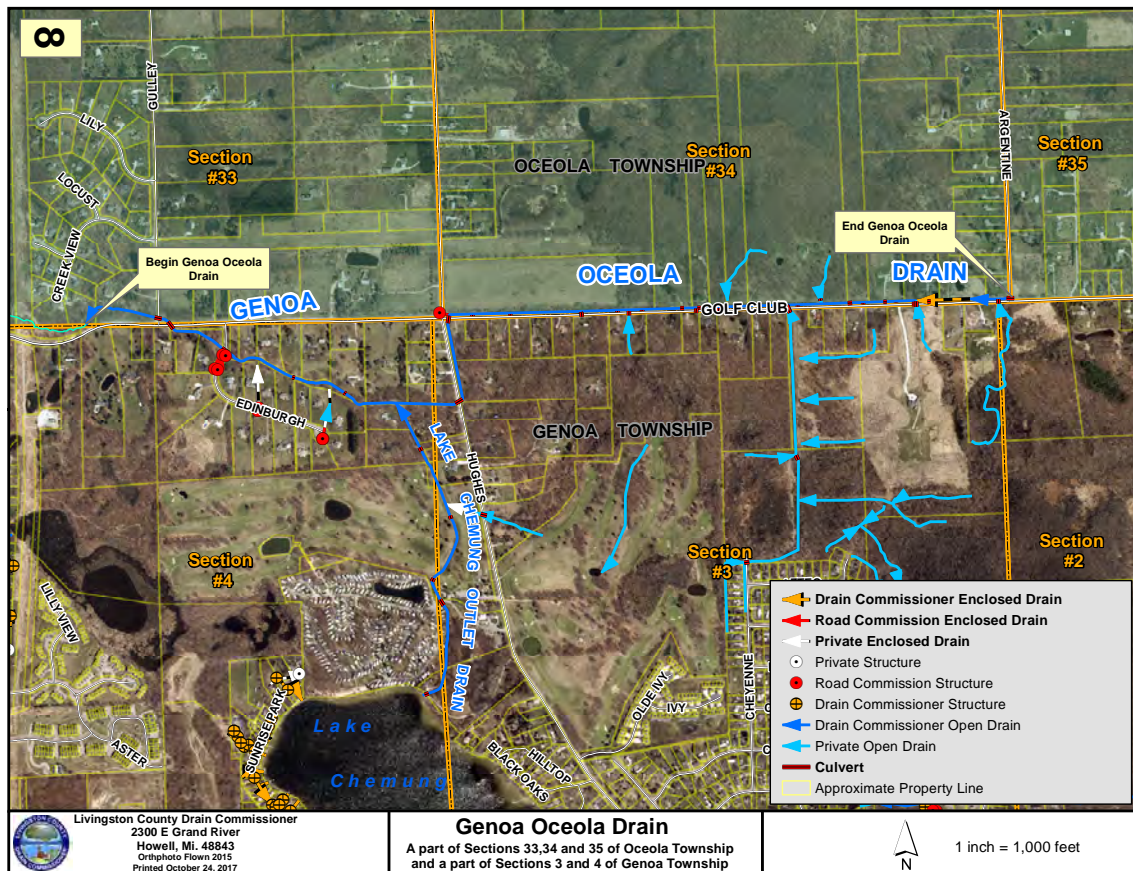
The Genoa Township is of the Marion Genoa drain drainage district which includes a part of Marion and Genoa Townships and the City of Howell. The county open drain is primarily located in the northwest corner of the Township.

According to Livingston County website, each drainage district is supported by a drain special assessment that covers the cost of maintaining the county-owned portion of the drainage system. A drainage district is a legally established area of land that benefits from a common outlet, which are determined by historical records and the natural topography of the land and rarely correspond to political boundaries, such as Townships.

Genoa Oceola Drain

This drain runs along the Oceola and Genoa Township boundary. It is approximately 9,943 linear feet, of which approximately, 6,208 linear feet is located in the Oceola Township.

MAP 1.9. LIVINGSTON COUNTY DRAINS



Watersheds

The protection of regional watersheds is critical for maintaining wildlife habitat, mitigating stormwater and protecting groundwater. Genoa Township is comprised of land in both the Shiawassee and Huron River watersheds. This means that anywhere in Genoa Township, all of the water under or on a particular piece of the land drains to either the Shiawassee or Huron River. Generally, the northwest half of the Township belongs to the Shiawassee River Watershed, while the southeast half drains to the Huron River.

Shiawassee River Watershed

According to the Shiawassee Conservation District, the Shiawassee River Watershed covers 742,400 acres of agriculture, urban, forest and natural areas. The Shiawassee Conservation District developed a Mid-Shiawassee River Watershed Plan in 2002, and updated it in 2012. This Watershed boasts many special resources including one of the best preserved warm-water river systems in the southern Great Lakes. The watershed supports 59 species of fish and 12 species of freshwater mussel. Three categories of wildlife support hunting and/or recreation in the watershed: Openland (quail, pheasant, rabbit, white-tailed deer); Woodland (squirrels, ruffed grouse, woodcocks, white-tailed deer); and Wetland (muskrat, beaver, ducks, geese, minks). There are six county parks within Shiawassee County and a 100-acre YMCA outdoor education center along the river. There are 11,000 acres of wetlands in the watershed, with an average size of 4.5 acres. There are approximately 12,000 septic systems in the watershed, in Shiawassee County.

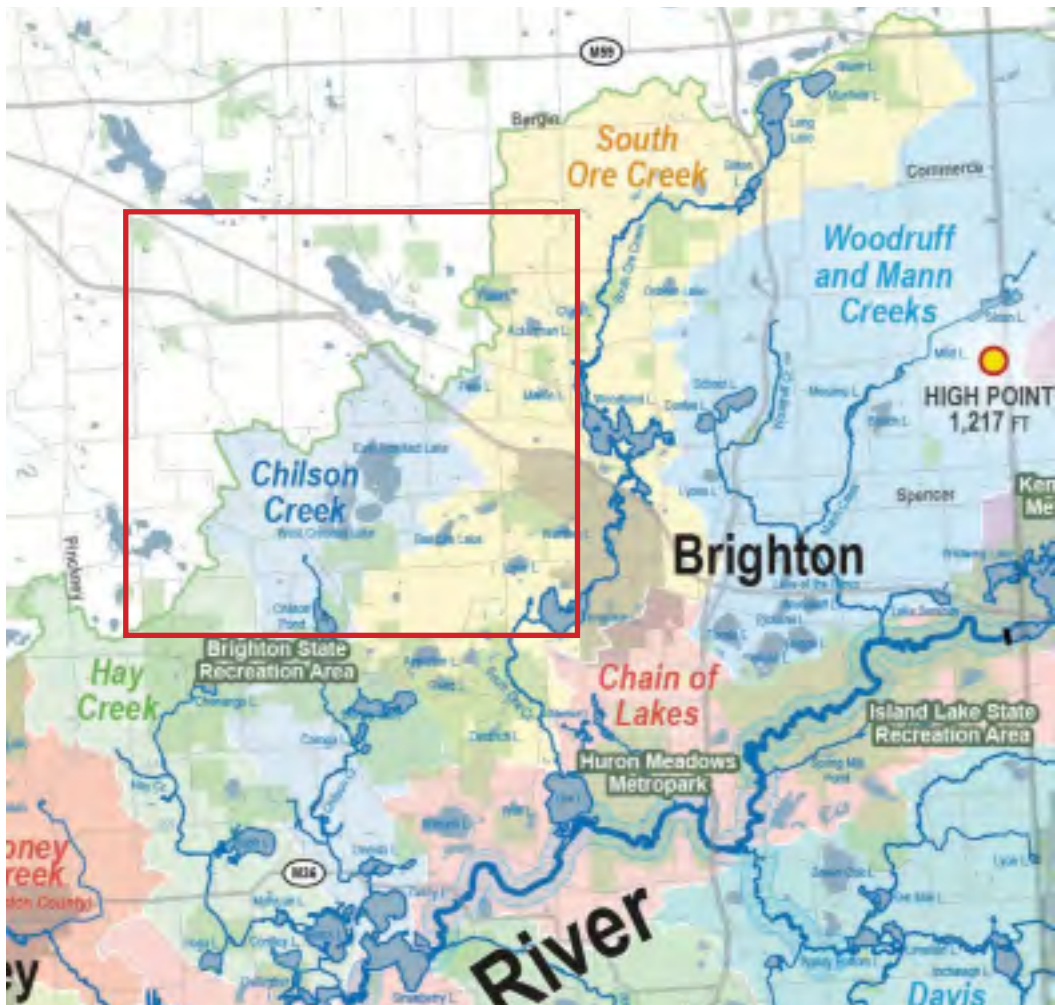
Huron River Watershed

According to Huron River Watershed Council (hwrc) website, the Huron River Watershed spans a land area of more than 900 square miles and drains water to the Huron River through hundreds of tributary creeks and streams. The river itself flows more than 125 miles from its headwaters at Big Lake, near Pontiac, to its mouth at Lake Erie. About 1200 miles of creeks and streams flow into the Huron's main branch. The river's drainage area includes seven Michigan counties (Oakland, Livingston, Ingham, Jackson, Washtenaw, Wayne, Monroe), 63 municipal governments, and six hundred and fifty thousand residents. The spectrum of Land Use and water environments ranges across remote natural preserves, cultivated farmland, urban and industrial centers, suburban sprawl, and an equal diversity of lakes, ponds, wetlands, creeks, and streams.

- **Chilson Creekshed.** Chilson Creek flows through land enriched by glaciers with deep deposits of sand and gravel and is part of the lake belt that stretches through Livingston and Oakland Counties. It is one of the smaller major drainages in the Huron River, draining only 17 square miles. Chilson Creek eventually empties into Zukey Lake, which opens into Strawberry Lake, part of the Chain of Lakes of the Huron River. The entire creekshed lies in Hamburg and Genoa Townships, Livingston County.
- **Hay Creekshed.** Hay Creek flows through land enriched by glaciers with deep deposits of sand and gravel. What was once oak-hickory forests and oak barrens on higher ground and inland wet prairie in low lying areas and along the creek was first converted to farm fields and today is mostly single family homes spread out throughout the landscape and clustered around the lakes, M-36, and Swarthout Road. The Hay creekshed is one of the smaller major drainages in the Huron River, draining only 12 square miles, 8 of which is considered the main branch. The majority of the creekshed is in Hamburg Township, Livingston County, with only the tips of a couple tributaries in Putnam and Genoa Townships. The Huron River Watershed Council asks local communities to help with data collection and monitoring in this creekshed.
- **South Ore Creekshed.** South Ore Creek's main stem and its tributaries total 36 miles of waterways. The main branch starts at the outflow of Maxfield and Long Lakes. From there, flows south through the City of Brighton, through Brighton State Lake Recreation Area, and then drains into the main branch of the Huron River. Initial European settlement centered on the transformation of the open barrens for agricultural production and the forested areas for timber. Over the past few decades agriculture has been quickly diminishing as land has transferred to suburban uses. The Huron River Watershed Council notes that dams on the lower half of South Ore Creek are a likely cause of many of the creek's problems (which include altering the stream's hydrology and degrading fish and insect habitat) and recommends that the local governments in charge of these dams need to look carefully at these structures and determine if their presence is worth the environmental cost and if dam management could be conducted to mimic more natural stream flows.

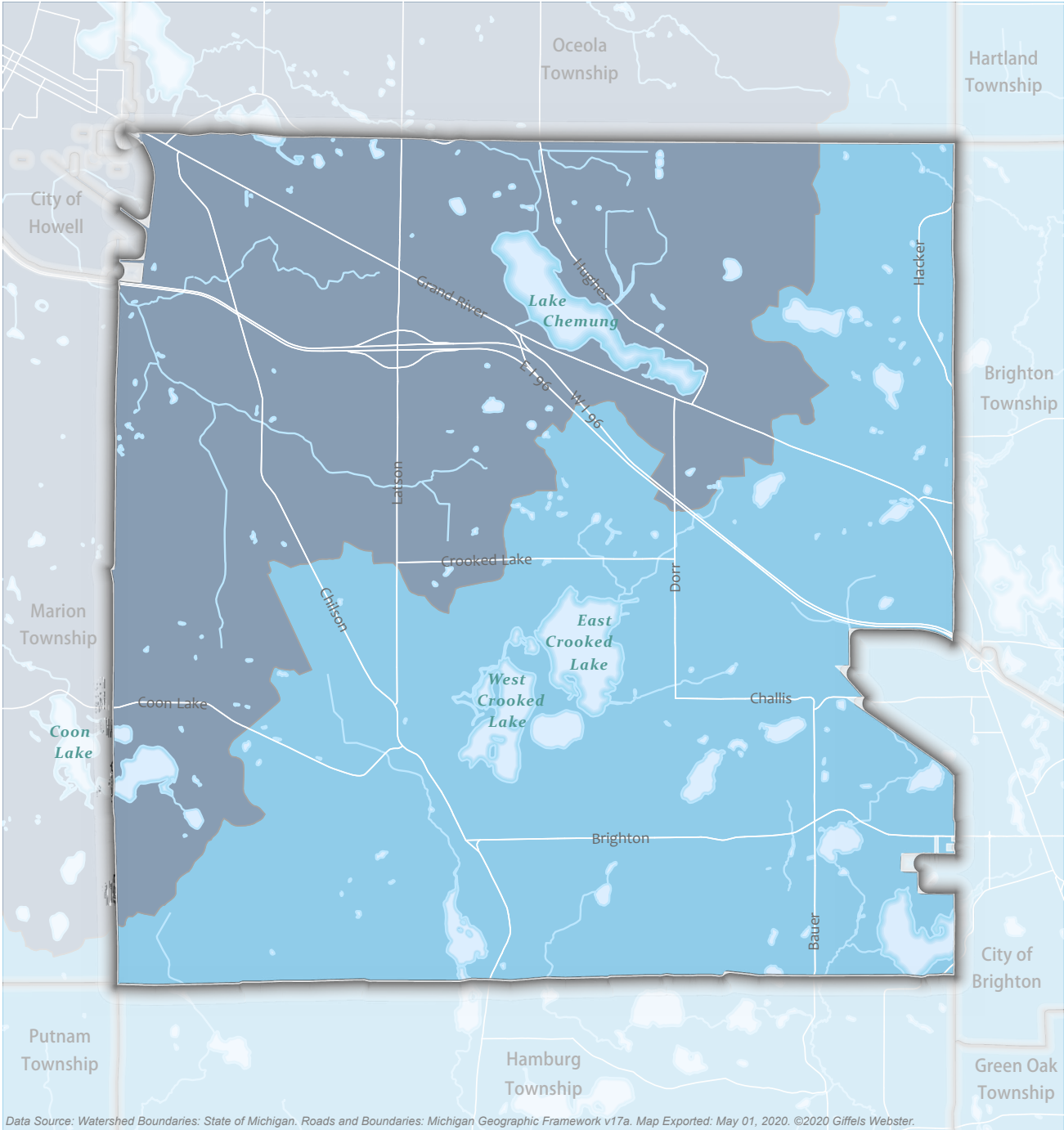


MAP 1.10. CREEKSHEDS IN GENOA TOWNSHIP, HURON RIVER WATERSHED



Source: Huron River Watershed Council

MAP 1.11. WATERSHED BASINS



0 2,500 5,000 10,000 Feet

HURON
SHIAWASSEE

Ground Water

Important factors in the evaluation of groundwater are the quantity and quality of the water. Quantity or yield standards for a typical residential or commercial use range from 7 gallons per minute to 20 gallons per minute. Water is generally available in sufficient quantity and will not likely be a factor in limiting growth. Water quality is a more important factor than water availability. Water hardness, iron content, salinity and septic field contamination are hazards encountered in Genoa Township.

Groundwater Contamination

Potential sources of groundwater contamination can result from all of the various Land Uses within Genoa Township. The level of threat of groundwater contamination will vary based on 1) the susceptibility of groundwater to contamination due to geologic features, 2) contamination loading rates based upon Land Use and hazardous materials management and 3) the amount and type of hazardous materials utilized within the Township.

Major sources of groundwater contamination are as follows:

- Buried wastes in landfills discharge liquids referred to as leachate which can enter groundwater.
- Agricultural fertilizers and pesticides often infiltrate the soil surface and enter groundwater.
- Urban storm water run-off from buildings, streets and parking lots contains contaminants that infiltrate the soil and enter waterways.
- Septic drain fields release sewage effluent into the soil through seepage beds.
- Spills and leakage of hazardous materials such as underground storage tanks and spills of hazardous materials will infiltrate the soil surface and enter groundwater if not properly contained. State and county requirements will need to be adhered to for any facility within the Township that involves the use, storage or disposal of hazardous materials. Facilities for storing hazardous materials should have secondary containment and a pollution incident prevention plan.

Potential Environmentally Impacts Sites

According to Livingston County Health Department records, there are a few contaminated sites within the Township which pose environmental problems. Michigan Public Act 307 provides for identification, risk assessment, evaluation and cleanup of sites of environmental contamination in the State. Sites are identified through information from concerned citizens, environmental groups, industry, local health departments, EGLE staff and others. From this process a priority list was and will continually be, updated. This list is used in part to develop funding recommendations to undertake response activities utilizing state funds when the parties responsible for the contamination are unwilling or unable.

Six Act 307 Sites have been identified in Genoa Township. These are located in industrial and commercial areas, with the majority in the northwest corner of the Township near the city of Howell. These locations are planned to remain in industrial, commercial or public Land Uses.

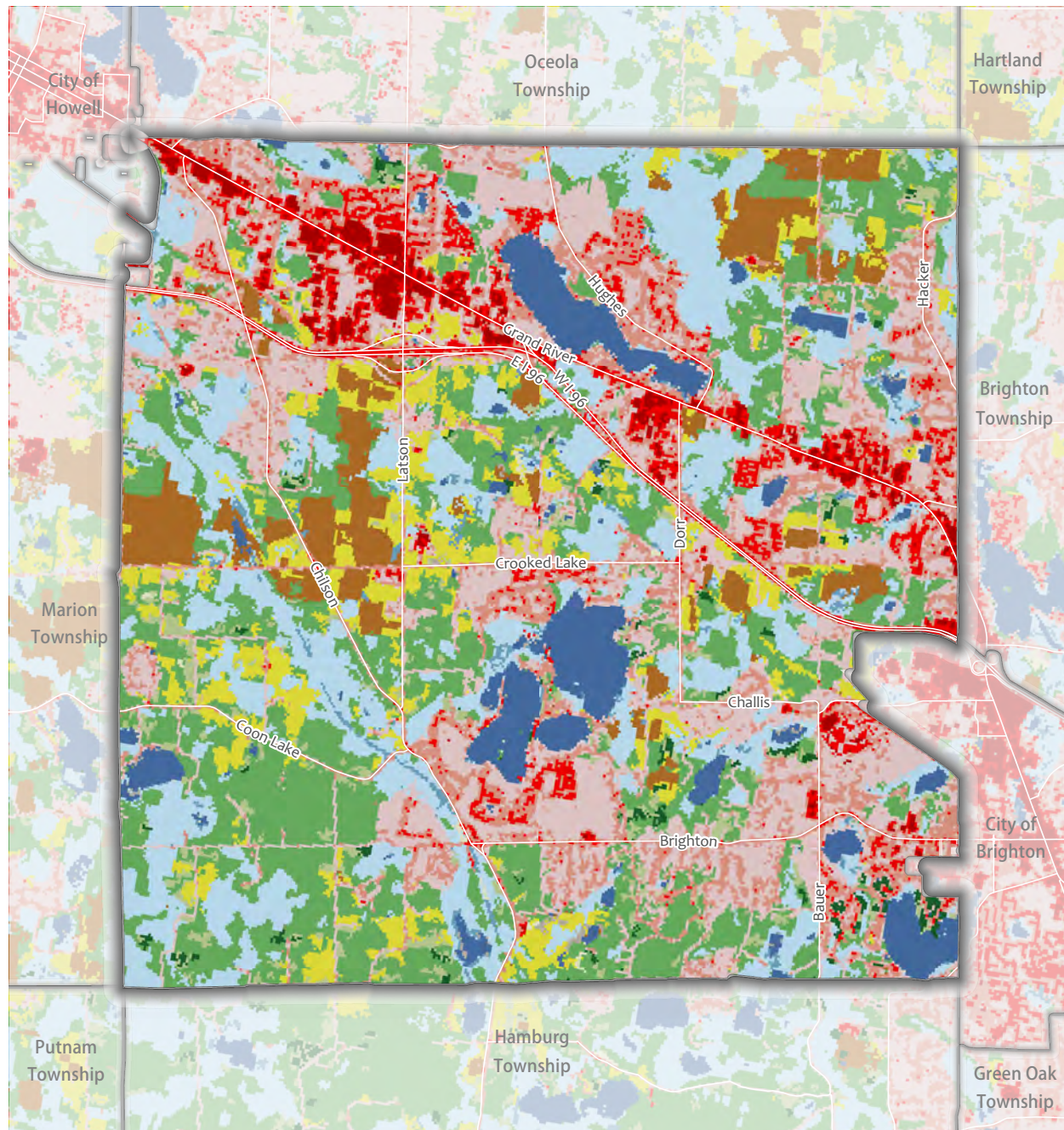
A closed landfill is purported to be located on the south side of Brighton Road, east of Chilson Road.

Impervious Surfaces

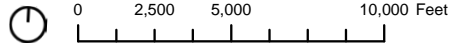
Impervious surfaces include roads, buildings and other hard-packed surfaces that prevent rain and snow from being absorbed into the ground. This can have an effect on local streams, both in water quality and stream flow as well as flooding. As more stormwater runoff occurs, it is collected by drainage systems that combine curbs, storm sewers, and ditches to carry stormwater runoff directly to streams. The more developed a watershed area is, there is an increased likelihood of more frequent and more severe flooding as well as higher contamination of this water.

The Impervious Surfaces map illustrates areas of the Township that are built or otherwise developed, either with buildings, roads or other structures. The intensity with which land is developed coincides with the built environment - more intense commercial uses along the Grand River corridor, with less developed areas off the main roads.

MAP 1.12. IMPERVIOUS SURFACES



Data Source: Land Cover: USGS, Roads: Michigan Open Data v17a. Map Exported: October 07, 2021. ©2021 Giffels Webster.



Estimated Percentage of Impervious Surfaces based on Land Cover



Existing Land Use

Existing Land Use

Genoa Township is predominantly comprised of single-family residential Land Uses (See Map 1.14). Non-residential development is concentrated largely in the north portion of the Township, along the Grand River corridor, where it is roughly anchored by the cities of Howell and Brighton. While some Land Use categories have changed in size over the past 8-10 years, most of this change has been to single family residential. Descriptions of the existing Land Uses are provided below and changes from the 2012 Master Plan are noted:

Agricultural & Rural Residential

This Land Use category includes both lands actively used for agricultural purposes as well as large lot residential areas. This category totals 9,461 acres, or almost 41% of the Township.

Single-Family Residential

This category includes single-family residential on lots less than three acres. This type of residential development is dispersed throughout the area. This category includes about 3,774 acres, or 16% of the Township.

Multiple-Family Residential

This category includes attached townhomes, apartment buildings, and manufactured housing parks. There are approximately 450 acres of multiple family residential or about two percent of the Township.

Commercial

Commercial uses in the Township are located primarily along the Grand River Avenue frontage. Grand River Avenue is the most heavily traveled roadway in Genoa Township. As a result, small regional shopping centers, individual business establishments and small offices have developed along this segment. Commercial/office use comprises about 940 acres of land, or four percent of the Township.

Industrial

Existing industrial uses are located north of I-96 on the south side of Grand River Avenue between Chilson and Latson. There are a number of small to medium sized industrial uses dispersed along the Grand River Avenue corridor. The largest industrial area is the partially developed 200 acre Grand Oaks Industrial Park just west of Latson Road between I-96 and Grand River Avenue. In total, about 233 developed acres of industrial land, or about one percent, exist in the Township, .

Public/Quasi-Public

Areas designated as Public/Quasi-Public include public uses such as Township Hall, governmental buildings, churches and schools. These are dispersed throughout the Township with a high concentration of government facilities in the northwest corner towards the City of Howell. There is a total of about 438 acres of public land, or two percent in the Township.

Parks

This classification includes areas such as golf courses, miniature golf centers, recreational vehicle campgrounds, parks, ski areas, MDNR lake access sites, playgrounds, trails, athletic fields, and the Brighton Recreation Area which together total 2,550 acres, or 11% of the Township.

Vacant land

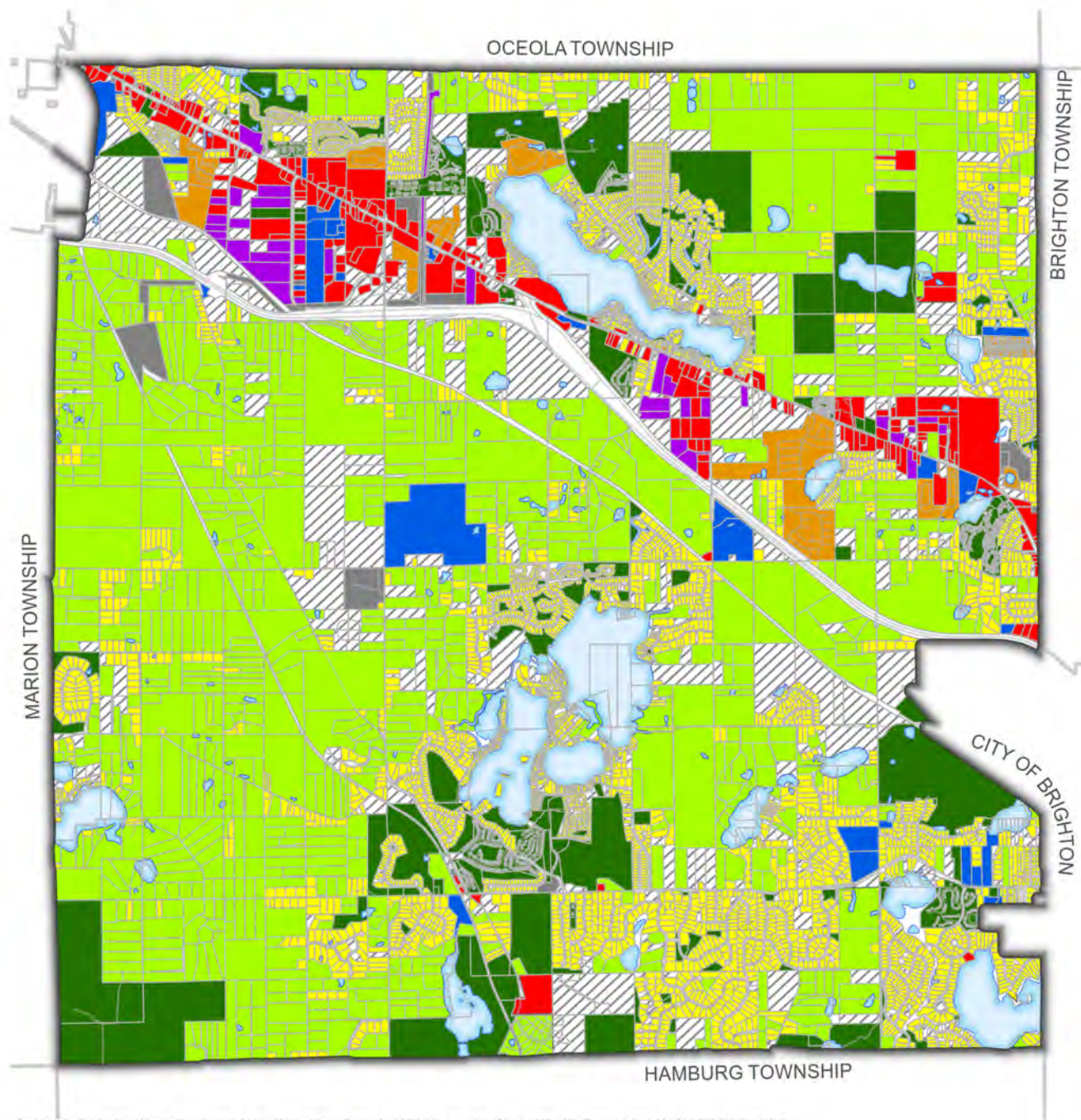
Vacant land comprises about 2,386 acres or ten percent of the Township.

Transportation, Communication and Utilities

These uses comprise about 239 acres or one percent of the Township.

Note. A small amount of the Township is considered “not parceled” and is considered “miscellaneous.”

MAP 1.13. EXISTING LAND USE













Data Source: Existing Land Use: Oakland County; Roads: Michigan Open Data v178; ADDA Boundary; City of Sylvan Lake; Map Exported: June 14, 2022; ©2020 Giffels Webster



0 2,500 5,000 Feet

- | | |
|---|---|
| Agriculture and Rural Residential | Parks |
| Multi-Family Residential | Single-Family Housing |
| Commercial | Transp/Comm/Utilities |
| Industrial | Vacant |
| Public | Water |

TABLE 1.9. PERCENT DISTRIBUTION OF EXISTING LAND USE CATEGORIES

ELU category in GIS	Acres 2020	Percent of Land Use 2020
 Agricultural / Rural Residence	9461	40.7
 Multi Family Residential (Condo, multi and mobile)	445	1.9
 Commercial (hospitality, medical, mixed, office, retail)	939	4.0
 Industrial	233	1.0
 Public (inst, Parking)	438	1.9
 Parks (recreation and golf)	2550	11.0
 Single Family Housing	3774	16.2
 Transportation/Communication/Utilities	239	1.0
 Vacant	2387	10.3
 Water	1499	6.4
Not parceled	1307	5.6
Total	23272	100.0

Public Input

Leadership Visioning Summary

The Master Plan update process was re-started in July 2021 with a joint meeting with members of the Planning Commission, Township board, ZBA and Staff. The purpose of the “Leadership meeting” was to understand how the current leadership of the Township felt, and what board and committee members would like the Master Plan to focus on. The group completed two exercises in order to identify and prioritize Township’s strengths and weaknesses.

Step 1. Identify

The first asked Individuals to write down what they felt were strengths and weaknesses within the community with a specific focus on residential and non-residential (primarily commercial) areas. Post-it notes were placed in two categories: strengths (“what’s working”) and weaknesses (“what needs work”).

Step 2. Prioritize

For the second exercise, participants were given dots and asked to vote on the top 5 strengths and weaknesses as counted in the previous exercise.

TABLE 2.1. GENOA TOWNSHIP STRENGTHS AND WEAKNESSES



Strengths
What is working?



Weaknesses
What needs work?

Residential

Variety of housing	Lack of starter/age in place homes
Zoning code enforcement	Affordability
High quality subdivisions (PUD)	Road/connectivity to commercial
Large lots	Pedestrian connections (sidewalks/bikes)

Non-residential

Variety of businesses/divers tax base	Vacancies/state of buildings
Good zoning standards	/Lack of groceries/ variety of retail
Good planning	Traffic

Source: Giffels Webster



TABLE 2.2. RESIDENTIAL STRENGTHS & WEAKNESSES

Strengths: What is working?		Weaknesses: What needs work?	
Topic	No. of votes	Topic	No. of votes
Variety of housing	9	Lack of starter/age in place home s	12
Zoning code enforcement	6	Affordability	6
High quality subdivisions (PUD)	5	Road/connectivity to commercial	6
Large lots	5	Pedestrian connections (sidewalks/bikes)	6
Waterfront homes	4	Small business growth / downtown	4
Location	4	Density/big city vibe	2
Tax base	3	Zoning restrictions	2
Natural feature preservation	2	Broadband	2
Variety of retail (near res)	1	Green development	1
Not many vacancies	1	Safety	1
Density	1	Lake access for non-residents	1
Schools	1		
Safe and Friendly	1		

TABLE 2.3. NON-RESIDENTIAL STRENGTHS & WEAKNESSES

Strengths: What is working?		Weaknesses: What needs work?	
Topic	No. of votes	Topic	No. of votes
Variety of businesses/divers tax base	9	Vacancies/state of buildings	11
Good zoning standards	9	Lack of groceries/ variety of retail	6
Brighton-Howell connector (location)	5	Traffic	6
Good planning	5	Commercial zoning enforcement	5
Twip government/staff	2	Sidewalks/connectivity	4
Access to grand river bus.	2	Industrial/commercial requirements	2
Medical/professional services	2	Lack of professional jobs	2
Large commercial opportunities	1	Broadband/technology	2
Occupancy	1	Lack of senior center	1
Interest in area/demographics	1	Commercial outside GR corridor	1
		Cross easement disconnects	1
		Inconsistent tax rates	1
		"Rural forever" attitude	

Source: Giffels Webster



Open House Summary

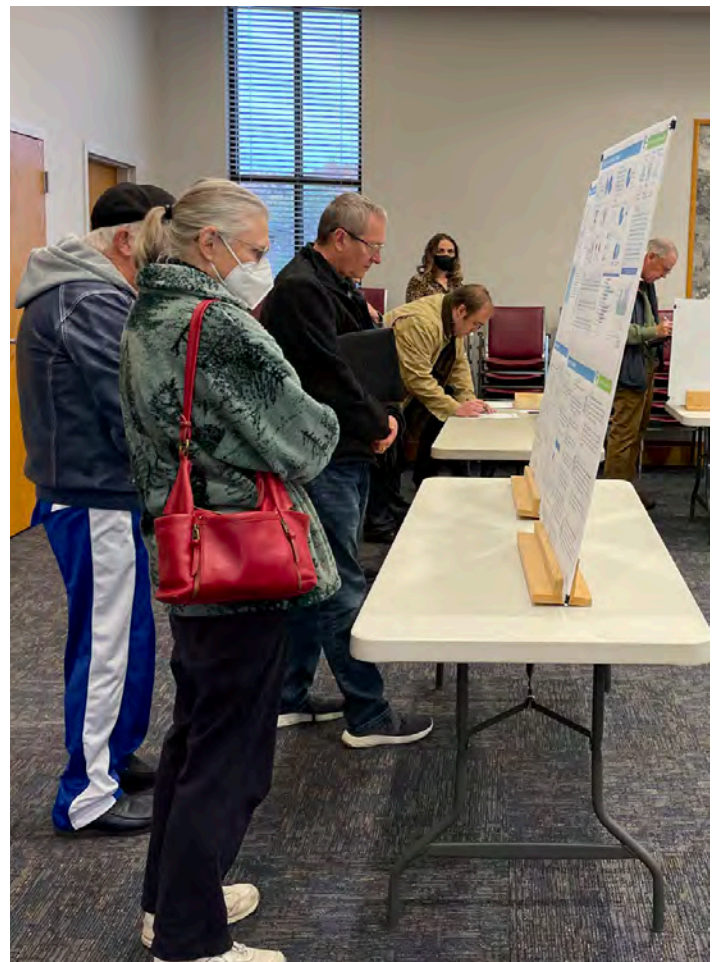
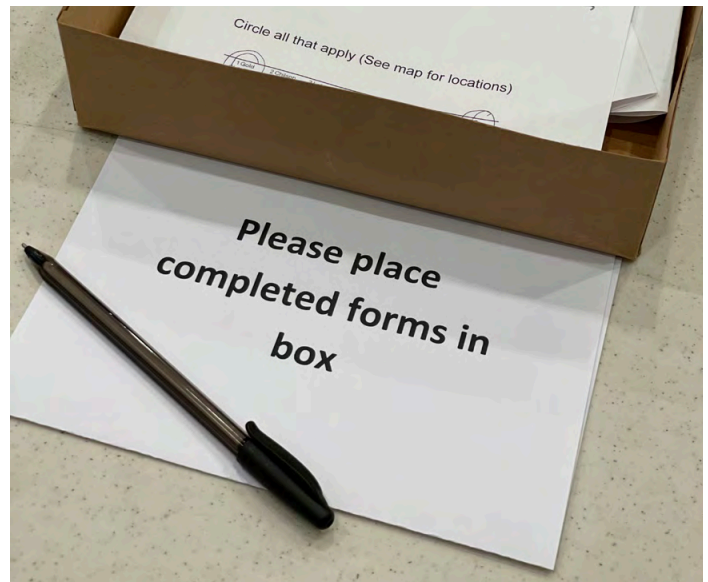
Genoa Township conducted an open house on November 10, 2021, at the Township Hall to collect input for the Master Plan update. A summary of existing conditions of the Township that includes current demographic data, local economy, natural features is provided for context. A summary of the market assessment summary that was initially conducted in 2020 and updated in 2021 is also included.

The information provided at the open house was hosted on a website that was made available for the residents for a week following the open house. The website included a survey with the same questions asked at the open house. This was intended to provide an extended opportunity for the residents to provide input at their convenience. Please refer to the appendix for a copy of the posters from the open house.

The information and the questions at the open house were framed based on Planning Commission's guidance and input from their October 25, 2021. At that meeting, the Planning Commission discussed the community's identity, vision, and goals for the next 10-15 years. They supported the idea of identifying and protecting the community character. Community character guides the way we regulate the development and redevelopment of land.

Open house participants (in-person and online) were asked about their perception of community, potential locations to identify gateways around the Township, preference about their housing styles, recommended non-motorized improvements, and their general thoughts of 2015 adopted future Land Use map and proposed goals. Majority of questions were rating-based.

Representatives from the Township's various boards and commissions attended the meeting. Approximately 40 people participated in-person; there were 285 views of the project website between November 7-December 7. Seventeen responses were gathered. A number of participants provided their responses in groups. Most participants are within the 55-74 age group living in a household of two adults and no kids.



Source: Giffels Webster, 2021



Community Character.

Participants were asked to identify three things they identify/love about Genoa and things that would make people more connected with Genoa. A majority of residents identify the Township as a small town with access to nature, recreation and a quiet place to raise family with convenient access to urban communities. Participants supported maintaining the rural character, creating more annual community events and providing affordable housing. This was also the top priority goal.

Gateways.

Gateways reinforce community identity. The respondents were provided potential gateway locations and precedent images of elements that contribute to a gateway. A majority of the responses supported creating gateways at entry points to the Township along Grand River Avenue by using landscape elements.

FIG. 2.1.POTENTIAL GATEWAYS

Entry points to the Township - Grand River, 6.6

Other entry points to the Township, 5.6

District hubs, 4.9

Rural/Recreation areas, 4.6

FIG. 2.2. PREFERRED GATEWAY ELEMENTS



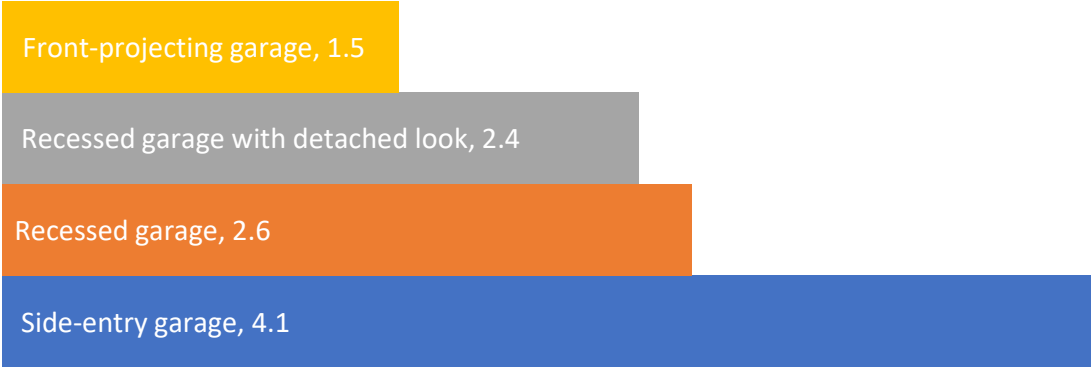
Transportation Connectivity.

A greenways plan was prepared a number of years ago for southeast Livingston County. This plan illustrates a prioritized non-motorized system of paths and conservation corridors containing significant natural features. The respondents were asked if they agree with recommended priority ratings. The response was neutral. The responses indicate a strong support for sidewalk connections along Challis, Chilson Road and safe non-motorized access to elementary schools.

Housing.

The residents were presented images of different single-family styles including the typical front projecting garage style. There was clear support for side-entry garage-style housing. The response was split when asked about their preference to allow accessory dwelling units within single-family districts.

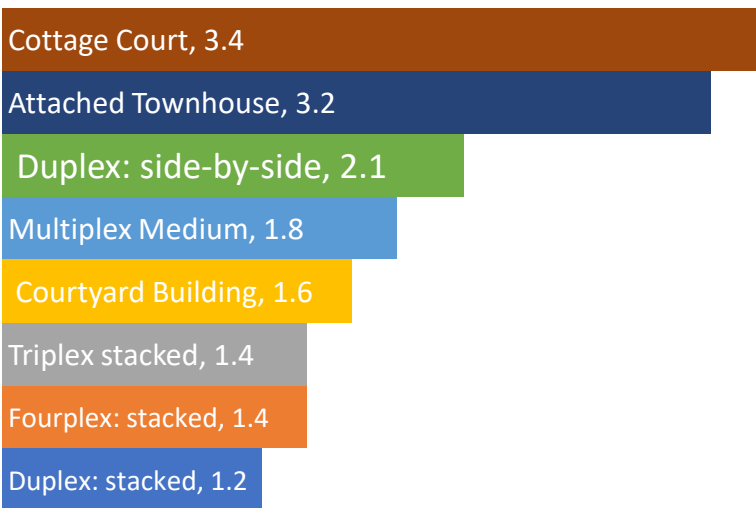
FIG. 2.3. PREFERRED SINGLE FAMILY HOUSING STYLES



Missing Middle Housing.

It is a range of multi-unit or clustered housing types compatible in scale with single-family homes that help meet the growing demand for walkable urban living. The participants were introduced to different style of missing middle housing using precedent images and asked their like on a scale of 1 to 10 (1 being ‘I don’t like it all). They support a need for diverse housing in general within the Township with cottage court style and attached townhomes as their preferred style.

FIG. 2.4. PREFERRED MISSING MIDDLE HOUSING STYLES



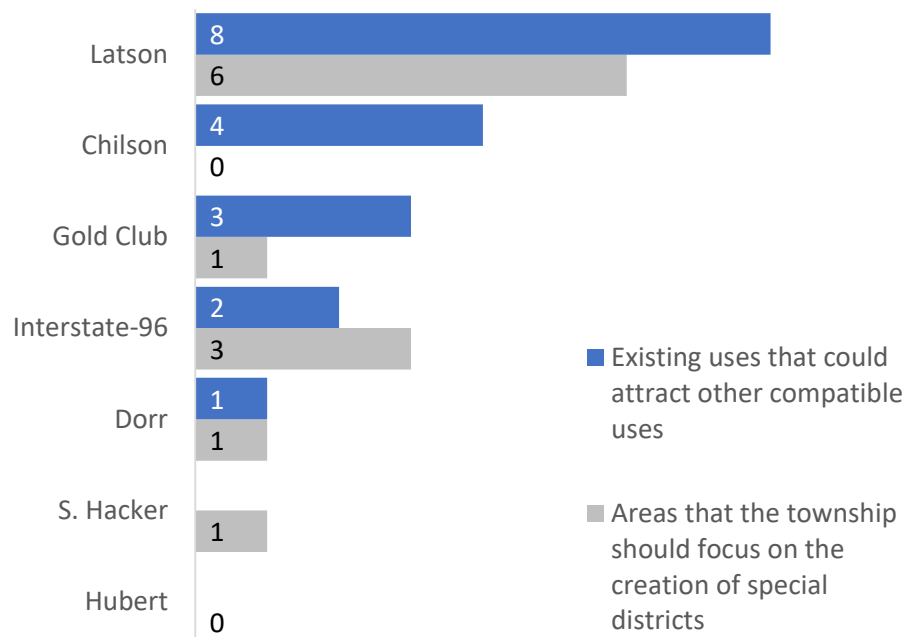


Source: Giffels Webster, 2021

Grand River Corridor.

This poster was intended to get high-level input about identifying areas along Grand River Avenue for creating a potential special district (mixed-use town center developments). Seven locations were provided for input. Examples of potential uses are provided. There is strong support for Latson/Grand River intersection followed by Chilson/Grand River intersection.

FIG. 2.5. PUBLIC INPUT-GRAND RIVER CORRIDOR



Future Land Use.

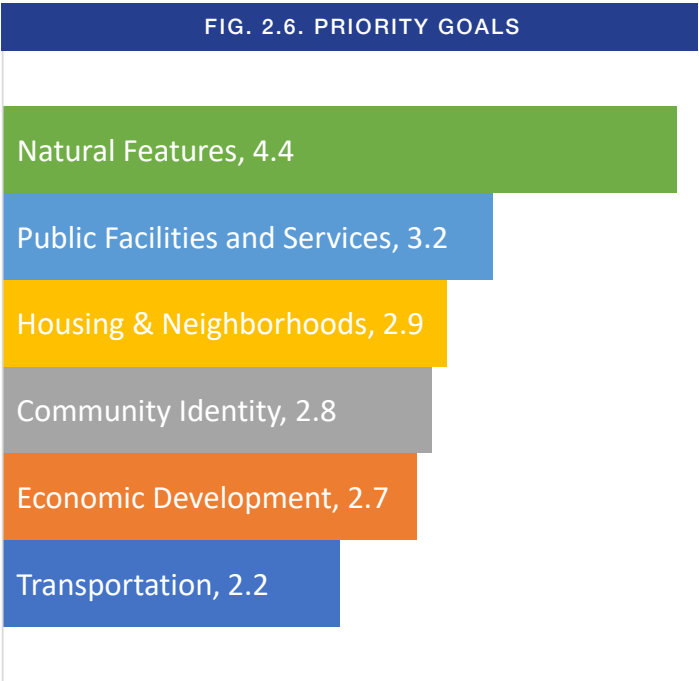
A copy of the 2015 Future Land Use Map was provided and the participants were asked to identify if there are any areas where they envision a different use in the Township than what is shown on the map currently. There were no areas recommended for change. However, a majority of respondents emphasized their support to keep the area near Brighton Lake Road and Chilson Road as low-density residential.

Goals and Objectives.

The participants were provided a list of six goals (Housing is proposed to be added with this update, the rest of the goals were updated from the previous Master Plan). They were asked to rate them by their importance. The goal related to Natural feature is rated as most important by participants.



Source: Giffels Webster, 2021





Source: Giffels Webster, 2021

Market Assessment Summary

Market Assessment Summary

The following is a summary of the economic assessment, which was conducted throughout 2020 and early 2021 to reflect post-pandemic spending behavior. The evaluation is based on historical data, a survey of area residents conducted during this effort, property trends, and other information provided by the Chesapeake Group. The focus is on both current and future market conditions for residential and non-residential activity.

Genoa Township is located in Livingston County, between the cities of Brighton and Howell, and has an estimated population of about 20,300 in roughly 8,200 households, or about 11% of the county's population.

Historical housing development

- Livingston County annually permitted a range of new housing units from a low of 174 units to 826 units between 2011 and 2020.
 - Genoa Township annually permitted a range from 6 units permitted in 2011 to 183 in 2017
- The County averaged 672 total units permitted and 78 multi-family structures from 2011 through 2020.
 - Genoa Township permitted an average of 28 single family units per year from 2010 to 2020
 - Genoa Township average 18 multi-family units per year, although all were constructed in 2017
- About 88 percent of the permitted units were single-family structures.
 - 77% of the units permitted in Genoa Township were single family

Residential property trends

Livingston County and Genoa Township

Home Sales

- For homes built before 2000, The average sale price is about \$456,000. The average unit is 2,527 square feet. The average sale price per square foot is \$181.
 - 78% of the housing stock in the Township was built prior to 2000
- For homes built from 2000 to 2020, the average price is about \$579,000. The average unit is 2,500 square feet. The average sale price per square foot is \$231.
 - 28% of the housing stock in the Township was built after 2000

Rentals

- The average one-bedroom unit is 795 square feet and rents for \$1,111 per month. The average rent per square foot is \$1.40 per month.
- The average two-bedroom unit is 1,075 square feet and rents for about \$1,325 per month. The average rent per square foot is \$1.25 per month.
- The average three-bedroom unit is 1,325 square feet and rents for about \$1,450 per month. The average rent per square foot is \$1.09 per month.
- The average rent in Genoa Township in 2020 was \$1,126 , indicating slightly lower prices in the Township than surrounding communities



Residential Survey Findings

(Based on 270 unique survey responses)

- The annual mean average household income is \$149,600.
- The majority of households have incomes between \$30,000 and \$80,000.
- There is a range of household income levels from \$20,000 to more than \$250,000 annually.
- The majority have lived in their current home for at least ten years.
- Over 25% have lived in their home for less than five years, with 46% of these having lived there for two years or less.

Commercial/Nonresidential market / Land Use

- Residents generally purchase goods in either Brighton or Howell.
- Meijer and Kroger dominate the grocery market. The combined market share for the two is 82 percent.
- 69% of respondents indicated their shopping habits will not change due to COVID-19
 - o 10% Now use pick-up service versus shopping in person and will likely continue after virus threat has diminished
- Pre Covid-19, more than one-half to two-thirds of all households purchased and ate dinner or lunch outside the home at least once a week.
 - o About one-third of lunch and dinner trips are to establishments in Genoa
 - o Most residents (91%) don't typically travel further than 15 minutes for dinner

Entertainment and Outdoor recreation

- Before Covid-19, about one-third of the Genoa area households sought some form of entertainment outside the home at least twice a month.
 - o About 16 percent went to movie theaters at least twice a month.
- Many participate in some form of outdoor recreation regularly. Other than walking, about four in ten do not generally participate in outdoor recreation.

Housing

- Key housing data for projections of future demand defined through the survey follows.
- The preponderance of homes in the area has three and four bedrooms.
- 99% of the responding households own their homes.
- 92% live there full-time, but 80 percent live there at least ten months in a year.
- The average respondent's home is about 2,500 square feet. However, about one in four live in homes less than 2,000 square feet.
- A significant minority - about 37 percent - defined a possible move to a different house in the next five years.
- Households likely to move are mainly, but not exclusively, those with primary income earners 55 years of age or older.
- The majority of those that may move are unlikely to move outside of Michigan.
 - o For those seeking larger units in the future, the current average unit is 1,650 square feet.
 - o For those seeking similar-sized units in the future, the current average unit is 2,300 square feet.
 - o For those seeking smaller units in the future, the current average unit is 2,650 square feet.
- Also, 17 percent of the households have one or more members that will probably move from their current home to create a separate household in the next three years. Those moving out create potential demand for new housing if the members can be captured in the Genoa area.

Employment and labor force

- About 44 percent of the households responding to the survey did not have any member employed full-time. About one-half of these households had one or more employed part-time or employed at more than one part-time job.
- Almost one in three households defined Covid-19 as impacting current employment among their members. Impacts include unemployment, diminished hours, diminished contract work, etc.



Demand Forecast

Understanding Economic Forecasting Models and Marketable Opportunities

The economic forecasting methods used here, which model a potential range of marketable opportunities in commercial, office, and residential space, rely on property trends, historical, local and regional data, and a survey of area residents conducted during summer, 2020. They assess the overall Genoa market and its potential growth and determine how much potential economic activity that could occur inside the Township and is occurring outside of the Township.

No community will capture all marketable activity and space. Furthermore, economic conditions continue to change; in most cases, generally speeding processes already impacting the economy before Covid-19. Purchasing online was growing rapidly prior to Covid-19, resulting in the exportation of dollars; the online purchasing rate sped up since the pandemic. Large proportions of office and workspace were being built in or simply moved to homes, and more people were working from remote locations before Covid-19; as with spending habits, the speed of change has accelerated.

This is important context for understanding all forecasting numbers in this plan. The demand forecasts are not a simple estimate of what is expected to be built in Genoa Township, but are rather an estimate of what could be built in the market based on forecast demand; The Township will capture some fraction of this.

Housing

Between 100 and 200 new non-single-family housing units could be added to the rooftops within the Township. The new housing units would be geared toward independent living for seniors and young households, with the latter containing workspace. Included could be semi-detached, townhome, duplex, and other related units. The units' locations should contribute to walkability and serve existing residents who would move to a previously defined scaled smaller unit from within the Genoa area. Such new units would most likely free up existing units to attract younger households.

Retail goods and services

The survey indicates an opportunity to diminish the exportation of dollars from Genoa Township residents, particularly in food, food services, and linked entertainment activity. Genoa Township residents are expected to support between an additional 300,000 and 326,000 square feet of retail goods and related services space by 2030. Most commercial opportunities are appropriate for land/parcels/structures associated with the core of Genoa Township or vacant space near residential concentrations.

Multi-tenant office space

New office space demand is sufficient to generate between 20,000 and 30,000 square feet of space, accommodated in vacant space, new development, and homes. The opportunity does not include those in the health care arena, such as outpatient infusion or surgery centers, or inclusion of higher educational institution space in Genoa Charter Township.

FIG 2.7. COMPOSITE CONSERVATIVELY ESTIMATED OPPORTUNITIES

The following figure summarizes the additional marketable activity for the Township by 2045.

The estimates are conservative, tending to understate demand to ensure Return-On-Investment for both the private and public sectors.



HOUSING

100-200
Additional non-single family units



RETAIL

150,000 - 170,000 sq. ft.
+ Recapture of select categories;
Retail Goods & Services, with
appropriate entertainment



OFFICE

20,000- to 30,000
sq. ft.
Including co-working
space

Goals and Objectives

Goals and Objectives

Goals are general guidelines that explain what the community wants to achieve. Goals are usually long-term and represent global visions such as “protect the Township’s natural resources.” Goals define the “what,” “why,” and “where,” but not the “how.” Identifying obstacles to overcome is also useful in defining goals.

Objectives identify the milestones that mark progress in achieving goals and provide more of the “how” goals will be implemented. For example, with a goal of “protect the Township’s natural resources,” an objective to “maintain the Township’s tree cover” is something that may be measured and tracked over time.

Action items are more specific and define the steps to accomplish objectives and attain the identified goals. The most effective action strategies will include who will tackle that task and when it should be accomplished. Using the above example objective of maintaining tree cover, one action strategy might be: “Using the Township’s GIS data, map the current tree cover in the Township.”

The overall goals of this Master Plan are to:

- Accommodate a variety of Land Uses in a logical pattern and complement community goals, the surrounding Land Uses, environment, capacity of roads and the sanitary sewer, and public water system capabilities.
- Provide land owners with reasonable use of their land in a manner that is compatible with adjacent Land Uses and the overall Land Use plan for the Township and the capacity of infrastructure.
- Promote harmonious and organized development consistent with adjacent Land Uses.
- Develop and maintain flexible codes and ordinances to meet the needs of current and future residents
- Manage development by maintaining a growth boundary to encourage efficient use of land, protect farmland and natural features, and allow the efficient provision of public services, utilities, and infrastructure.



1 Housing & Neighborhoods

Pattern of Development. Genoa Township is largely comprised of single-family homes, many of which are on large, rural lots. Housing is dispersed throughout the Township, with concentrations near the cities of Brighton and Howell.

Character. Housing and neighborhoods influence the character of the Township through the placement of homes on lots, the size of lots, the space between homes and the architectural designs, materials and colors of homes.

Variety. The housing types in Genoa Township are predominantly single-family, owner-occupied homes, but multi-unit housing options are available. To accommodate current and future residents, the Township will continue to offer a variety of home types in terms of size, style and location, ensuring that housing is available for a variety of ages, abilities and income levels.

Infrastructure. Neighborhoods will be strengthened by well-maintained infrastructure, including local roads, water, sewer and utilities that will be improved as needed to meet the needs of Township residents, while respecting the established natural features setbacks.

Connectivity. Neighborhoods near commercial nodes and connected neighborhoods will enable residents to minimize vehicular travel as well as maintain social networks with their neighbors.

Objectives

- Allow the pattern of homes on large rural lots to continue where it exists, particularly south of I-96.
- Focus new housing on concentrated areas near already-developed areas
- Ensure new development is of high quality and design.
- Ensure that housing is available near transportation corridors, goods and services.
- Encourage student housing associated with Cleary College.
- Encourage housing for older residents near medical facilities as well as goods and services.
- Encourage the ongoing maintenance and upkeep of housing
- Support older residents who wish to stay in their homes as long as possible.
- Allow existing lakefront homes to be improved and expanded without compromising the established character of the lake neighborhoods or water quality.
- Limit impact of short-term housing rentals

Measures of Success. How can the Township track progress towards the goals?

- The variety of housing types (single-family, two-family, etc.) increases
- There is a range of housing at various price points
- The number of housing units within ½ mile of Grand River Avenue increases
- The amount of open space south of I-96 remains constant
- Tree cover increases
- Water quality of local water bodies improves



2 Economic Development

Job Creation. Grand River Avenue is a well-developed commercial and transportation corridor in the Township that provides local jobs and employment. Quality industrial and technology-based development near Grand River and at I-96 Interchange areas in the Township will help diversify the tax base with room for future expansion, where not in conflict with surrounding Land Uses. Utilities, including broadband services, support local businesses and residents with home-based businesses.

Mix of Goods and Services. Genoa Township is centrally located in Livingston County, offering a wide variety of goods, services and jobs to residents and visitors. The Township will strive to attract new businesses that lead towards the creation of “hubs” of activity. Work with hospitals and service providers to coordinate programming and leverage synergies to recruit compatible users that will promote the Grand River Corridor east as a community health hub

Development. Development and redevelopment will be strategically located, primarily along the Grand River corridor to provide employment, shopping and recreational opportunities for current and future residents of the Township. High-quality site and building design will contribute to strong neighborhoods, vital shopping districts, and desirable employment centers. Support residents who work from home, either on a full-time or part-time basis.

Objectives:

- Allow flexibility of uses in the Grand River corridor.
- Ensure uses that rely on the interstate highway for logistics/transportation have adequate access.
- Work with property owners to identify and locate compatible/complementary users in concentrated areas to promote a thriving economic ecosystem.
- Strengthen the reputation of Genoa Township in the region for business development and job creation.
- Ensure adequate housing for the local workforce to support economic development.
- Support local broadband and technology services that will allow residents to work from their homes

Measures of Success. How can the Township track progress towards the goals?

- Commercial building permits increase
- Sign permits increase
- The number of jobs in the Township increases
- The number of residents who work in the Township increases
- The number of housing units within ½ mile of Grand River Avenue increases

3 Natural Features

Environment. The character of Genoa Township is distinctly defined by significant, sensitive natural amenities such as water bodies, wetlands, slopes, mature trees and natural ecosystems. This local ecosystem supports flora and fauna as well as the residents who call the Township home. The Township will engage the community with efforts to protect its local environment and protect the quality of the community's lakes and water resources from overcrowding and overuse.

Sustainable Development. The Township recognizes the importance of long-range planning combined with strategic actions to meet the current needs of residents and business owners without compromising the ability of future generations to meet their needs too. Particularly with respect to its many lakes, wetland and woodlands, the Township strives to protect and preserve the natural environment, recognizing the way in which it supports community health, promotes a prosperous economy, and a creates a vibrant and equitable community for all.

Resiliency. The Township seeks to be resilient with respect to environmental hazards, recognizing ways in which ongoing, persistent stresses, that impact the community over time as well as sudden, single events that disrupt the day-to-day functioning of the community.

Objectives:

- Protect natural areas by limiting development to areas with existing infrastructure and strictly enforcing the natural features setback
- Create strategies to conserve water and energy and reduce waste
- Protect the Township's groundwater resources by increasing wellhead protection and undertaking measures to prevent groundwater pollution.
- Concentrate development so there is minimal conflict between the man-made and natural environment.
- Establish Land Uses that are compatible with designated open space
- Identify ongoing environmental stresses, such as invasive species, in the community and the potential for sudden events, such as flooding, and prepare plans to mitigate their impacts.
- Increase tree cover and reduce impervious surfaces in developed areas to better manage stormwater and mitigate impacts of climate change.
- Monitor septic capacity to ensure lake front properties are properly maintained and direct new development to areas that have sufficient facilities

Measures of Success. How can the Township track progress towards the goals?

- The amount of open space in the community remains constant
- Tree cover is maintained or increases
- Impervious surfaces decrease
- Water quality improves in local bodies of water

4 Transportation

Multi-modal. Genoa Township's transportation network is comprised of regional and local roads, highways, sidewalks and multi-use trails and pathways. Together, these modes of transportation offer residents and visitors the ability to work, shop, dine and recreate. Transit options will be accessible to support local residents and businesses.

Cooperative. A safe, equitable, efficient transportation system will be maintained, in conjunction with county and state road agencies, in a cost-efficient manner that enhances the character of the Township, supports multiple modes of travel and meets the mobility needs of residents of all ages and abilities. Regional traffic through Township will have minimal conflict on local streets, utilizing traffic calming techniques.

Local. Local roads will be maintained and improved to support safe travel within neighborhoods as well as to provide access to community facilities, goods and services. The development of new commercial and residential uses will be concentrated along the Grand River corridor to allow residents opportunities to walk rather than drive personal vehicles as well as accommodate walking between uses to reduce traffic congestion. Changes in development will be supported by related road improvements.

Objectives:

- Maintain the pathway along Grand River Avenue through the Township.
- Allow and encourage the mix of commercial and residential uses along the Grand River corridor.
- Partner with county and state road agencies to support non-motorized travel, improve safety and mitigate traffic congestion.
- Partner with local and regional agencies to develop transit options.
- Create a Complete Street network in the Township to allow residents opportunities to safely access community destinations through a variety of modes, including additional pathways and crossings.
- Prioritize the Dorr Road highway crossing for pedestrian accommodations when improvements are made

Measures of Success. How can the Township track progress towards the goals?

- Traffic crashes decrease
- Pathways increase
- The number of residents with access to non-motorized transportation facilities increases
- The number of residents with access to transit services increases
- The number of residents who work in the Township increases
- The number of housing units within ½ mile of Grand River Avenue increases
- The number of bus stops increases (LETS)
- The number of pedestrian crossing signals in the Township increases

5 Public Facilities and Services

Infrastructure. The Township will continue to provide utility improvements only in locations best suited for development to support managed growth and provide a growth boundary to ensure development is consistent with infrastructure planning. The Township will encourage resilient and sustainable infrastructure facilities, including alternative energy production,

Community-building. The Genoa Township Park is a centrally located full-service park and open space are that will continue to meet the needs of current and future residents with a wide variety of active and passive recreational opportunities. This park serves as a hub for community activities and is an identifiable place that promotes the identity of Genoa Township.

Partnerships. Public services are provided by not only Genoa Township, but also with assistance from the adjacent Townships and the cities of Brighton and Howell to provide area residents with high quality community services and facilities.

Objectives:

- Plan for infrastructure improvements and ongoing proactive management of local utilities, facilities and roads.
- Partner with local agencies to ensure long-term management of local infrastructure.
- Maintain and enhance recreational amenities at the Township Park to accommodate the needs of current and future residents of all ages and abilities.
- Partner with adjacent communities, local agencies and the county to provide recreational facilities and programs for residents.
- Identify alternative funding sources for infrastructure and recreation improvements.
- Encourage installation of alternative energy facilities, including solar.

Measures of Success. How can the Township track progress towards the goals?

- The number of residents using the Township Park increases
- Revenues from utilities cover associated expenses of maintenance and improvements
- The amount of alternative funding increases.
- The number of electric vehicle charging stations increases

Future Land Use Plan

Future Land Use Categories

Housing

There are six residential Land Use designations intended to provide a variety of housing options in terms of style and price range for current and future residents of all ages and abilities in Genoa Township. Intended densities range from one dwelling per five acres to 8 dwellings per acre and are applied in a way that is consistent with the Township's goals. Areas intended to reinforce the rural character of the Township have limited utility access and will serve for large-lot residential homes; these areas are only intended for residential uses or small-scale neighborhood-serving non-residential uses. To advance the Township's walkability and economic development goals, different housing types, from small-lot single-family homes to multiplexes and mixed use residential, are envisioned in areas that can support such development, with available utilities, and offer destinations to which local residents can walk.

Agricultural/Country Estate: The intent of this designation is to protect lands for agricultural use or to permit limited development with single family homes. Many of the areas are prime farmland or have significant natural limitations such as wetlands or severe soil limitations. As these areas are not planned for sanitary sewer, they can only support low density residential development. This classification is recommended for single family residences on lots no smaller than 5 acres.

Rural Residential: This designation identifies areas to be developed as single family residential on large lots. Many of the areas have significant natural limitations such as wetlands or severe soil limitations and are not planned for sanitary sewer. These areas are only intended for residential uses or small-scale neighborhood-serving non-residential uses. This classification is recommended for single family residences on lots no smaller than 2 acres or clustered development with a net density of 1 unit per acre.

Low Density Residential: This designation is for single family residential development located between rural residential areas and the more developed areas of the Township. While these areas are not planned for sewer service, they have fewer environmental constraints found in the Rural Residential. These areas are only intended for residential uses or small-scale neighborhood-serving non-residential uses. Single family residential uses within these areas will be located on lots of at least 1 acre in size.

Small Lot Single Family Residential: This designation refers to two distinct groups of single family residential uses: the older homes around Lake Chemung and the Tri- Lakes area and newer, small lot, single family subdivisions located within the more urbanized area of the Township. Secondly are These areas will generally be, or are planned to be, served by public water and sanitary sewer. Single family residential uses located within these areas will typically be located on lots ranging from 14,520 square feet to 21,780 square feet in size or 2 to 3 units per acre.

Medium Density Residential: This designation refers to medium density duplexes, attached condominiums and other multiple-family dwelling units. This area may also be developed with single-family homes on smaller ¼ acre lots. This designation is found within areas served, or planned to be served, by public water and sanitary sewer. New residential development should be located close to goods, services and job centers and should accommodate residents of all ages and abilities. Development will be at a density consistent with the infrastructure and land capabilities but will not exceed a density of 5 units per acre.



High Density Residential: This designation refers to higher density condominiums, apartments and other multiple family dwellings. This designation is found within areas served, or planned to be served, by public water and sanitary sewer and should primarily be located along the Grand River Corridor. Development should respond to infrastructure and land capabilities and should not exceed 8 units per acre unless designed to minimize impacts on adjacent uses by limiting impervious surfaces, adding green space and including community gathering spaces. This designation includes existing manufactured housing/mobile home parks; no new mobile home park areas are anticipated.

Commercial

The Township is planning for commercial development that serves both residents and visitors. A small-scale, low-intensity type of commercial closer to existing residential neighborhoods that may include goods, services and limited office uses will serve local residents. The Grand River Corridor will serve both local residents and, closer to the cities of Howell and Brighton as well as near the freeway, visitors and regional residents. In the corridor, commercial uses will include goods, services, offices and, in “hub” or “district” areas, residential uses.

Neighborhood Commercial: Retail and service establishments whose primary market area includes residents and employees from within a two-mile radius are designated by this category. These retail businesses and services are intended to serve the needs of nearby residential neighborhoods. Typical uses would include smaller general merchandising/retail establishments such as convenience stores, banks, dry cleaners, and beauty/barber shops, and small retail strips. Low trip-generating professional office uses (not medical) will serve not only local users of such services, but also will allow local residents the opportunity to work closer to home.

Interchange Commercial: Rather than typical interchanges where gas stations and fast food establishments are built piecemeal with little consideration for aesthetics, the intent of this designation is to promote planned development of these interchange commercial uses with high quality architecture. The Latson interchange is envisioned to be the premier exit for travelers along I-96: a destination where they can get out of their vehicles to walk around, dine, and shop.

- Appropriate uses include fast food, sit-down restaurants, gas stations, retail, and entertainment
- This area may be subject to design guidelines promoting walkability, increased landscaping standards, pedestrian-scale building siting and massing, and outdoor dining/gathering.
- Very few access points: each development shall provide access connections to adjacent properties so that there may be a shared access connection to a future traffic signal.

Interchange Campus: The intent is to create a district in the I-96 corridor that will accommodate large-scale institutional campuses close to the interchange without leap-frog development further south. The Future Land Use Map includes a “future transition area” south of this designated area. The Township will evaluate when it is appropriate to allow more intensive development in this area, based on surrounding development, demand for growth, and the ability for the area to accommodate the additional demands on utilities, transportation network and public services.

- Possible principal uses alone or in combination: medical center/clinics, higher education satellite, corporate offices, high-tech research & development (with no external impacts), indoor sports center, conference center/hotel, health clubs, office centers, or senior living. Ancillary uses that have a direct connection to the principal use are allowed and should be part of the overall plan, such as limited restaurants and professional services when included as part of an overall development.
- Any large-scale development should be a well-planned, campus-like setting, planned in close coordination with the Township. Upon submittal of the first development proposal for this area, an overall development plan must be provided. This plan shall guide development in the interchange campus area including signs, access/circulation, building design, landscape, and streetscape.

See the Appendix for additional information about this area as developed in the 2013 Master Plan



Industrial

Industrial: The intent is to develop industrial uses such as research, wholesale and warehouse activities and light industrial operations which manufacture, compound, process, package, assemble and/or treat finished or semi-finished products from previously prepared material. The processing of raw material for shipment in bulk form, to be used in an industrial operation at another location is found only in very defined and limited portions of this area.

Research and Development: This area should be developed as a light industrial/R&D/office park. High quality building architecture should be utilized to convey a high-quality image. Enhanced landscaping and screening should be provided along adjoining major thoroughfares. Flexibility in some zoning requirements may be considered in exchange for these aesthetic enhancements. There are two areas designated as R&D: one in the eastern end of Grand River near Euler Road that is partially developed and the second in the northwest, bounded by I-96 and the railroad, bisected by Chilson Road. These may be good areas to consider for alternative energy facilities, notably solar energy. Particularly along the Chilson Road corridor, as the eastern portion is land-locked with the highway and railroad. This area could serve as workforce housing, if it had non-motorized access over the railroad to Victory Drive or Grand Oaks Drive.

Other

Public/Quasi-Public: These are institutional land areas to be occupied by government, utility or civic uses such as churches, parks, state, county and municipal facilities and major utility lines.

Private Recreational: These are areas designated for private recreational facilities such as golf courses, campgrounds and private parks. Because they are primarily located in residential areas, should these uses cease, any future redevelopment is anticipated to be consistent with low density residential.

Redevelopment of Public/Quasi-Public Sites:

Development pressures may lead to a demand for some public sites or private recreational property to be developed with other types of uses. If there is any redevelopment of

What are “regional” uses?

Regional uses are typically located in geographic area, or “regional centers,” intended to serve as the focal points of regional commerce, identity, and activity. They cater to many neighborhoods and communities and serve a significantly larger population than the community in which they are located.

Regional centers contain a diversity of uses such as corporate and professional offices, retail commercial shopping centers and malls, government buildings (county or district-serving), major health facilities, major entertainment and cultural facilities and supporting services. Housing may be integrated with commercial uses to serve as workforce, support services, recreational uses, open spaces, and amenities.

Regional centers, typically, provide a significant number of jobs and many non-work destinations that generate and attract a high number of vehicular trips. They are typically high-density places whose physical form is substantially differentiated from the lower-density neighborhoods of the community. Such uses are ideally located with convenient access to major thoroughfares and freeways that can sustain high vehicle travel without generating traffic on local streets (i.e. contained to Grand River and 96)

public sites or private recreational lands, proper Land Use relationships must be maintained to ensure design and uses are compatible with the planned character of the surrounding area. In addition, since most of those sites have significant open space or natural features, some element of those features should be preserved. The Planned Unit Development (PUD) option contained in the Zoning Ordinance would be a good approach for this type of redevelopment. PUD provides design options to permit flexibility in the regulation of land development and innovation in design.



Grand River Corridor Mixed-Use Districts

This designation generally covers most of Grand River Avenue as it runs east-west through the northern part of Genoa Township and intends to allow flexibility of Land Uses while ensuring quality development and redevelopment. In these areas, commercial and residential uses, provided in a horizontal or vertical mixed use development pattern, will complement each other, creating “hubs” or “districts” of mutually supportive uses. It is envisioned that people may live near their places of work as well as near goods, services and entertainment uses and visitors to the areas who arrive by car can park once and walk to a variety of destinations. Site layout, landscaping, building design and connectivity will be important. Throughout these areas, walkability is encouraged, and identifiable “places” will be created to reflect a unique identity to Genoa Township.

A mix of uses may occur as vertical mixed-use, horizontal mixed-use or a mix of the two in one development. Vertical mixed-use is intended to allow for a combination of different uses in the same building where non-residential uses occupy the bottom portion of the building and residential on upper floors. Horizontal mixed-use allows commercial and residential uses on adjacent parcels that together may create a “hub” or district. Buildings will range from one to three stories and be set back from single family neighborhoods when they’re adjacent to the corridor. Screening to buffer single family neighborhoods from noise, light and traffic will also be important; however, pedestrian access should be maintained. Placemaking elements, such as street lights, trees and furnishings, along with public art and signage, will help reinforce the identity of this important corridor.

A variety of housing is envisioned in these areas as an alternative to some of the larger lot residential areas elsewhere in the Township. Housing in the mixed use areas will be smaller homes on smaller lots and multi-family dwellings. This housing will generally be more affordable than larger homes on larger lots, easier to maintain and serve a broad range of age groups, from college students to young professionals and older residents.

Regional commercial uses, such as auto-oriented uses (including fast-food) are only intended at interchange uses and where otherwise currently existing along Grand River Avenue. See page 3.34 for more details.

East Grand River District

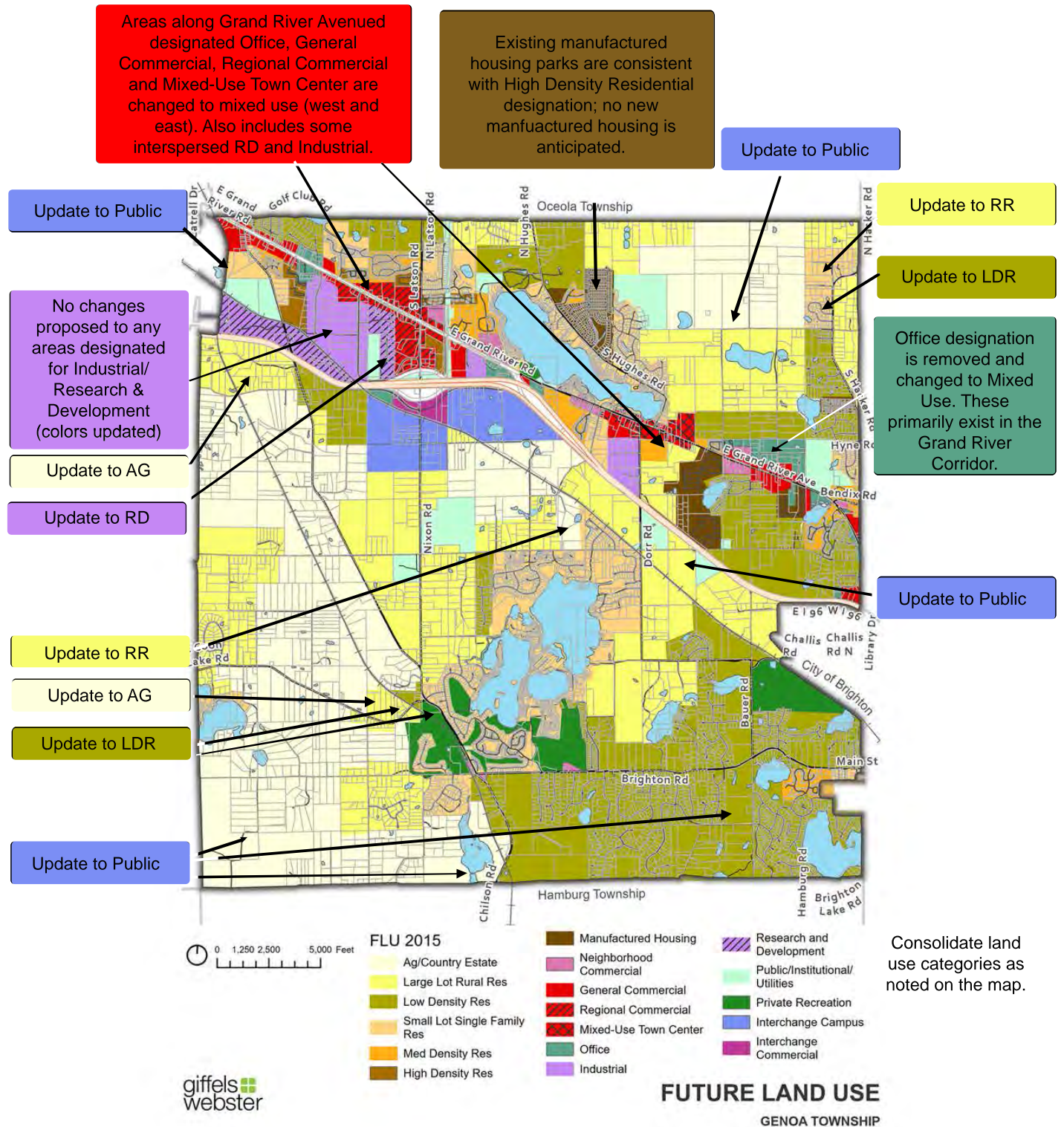
This district covers the area from the Township’s eastern border (north of Herbst) west to the I-96 interchange. It includes the “lake district,” where public access to Lake Chemung is provided on Grand River Avenue and also the “health hub,” which is a potential development area centered around St. Joseph Mercy Health Center. Both of these recognizable amenities offer opportunities to locate jobs, retailers, restaurants, recreation/entertainment, office and residential uses in a way that focuses on and supports community health. Buildings are intended to be one- to two-stories and sites developed in a way that minimizes the importance of the automobile and prioritizes the pedestrian. Housing in this area could focus on housing for older residents, providing them easy access to nearby medical facilities as well as other goods and services.

West Grand River District

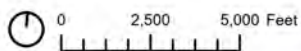
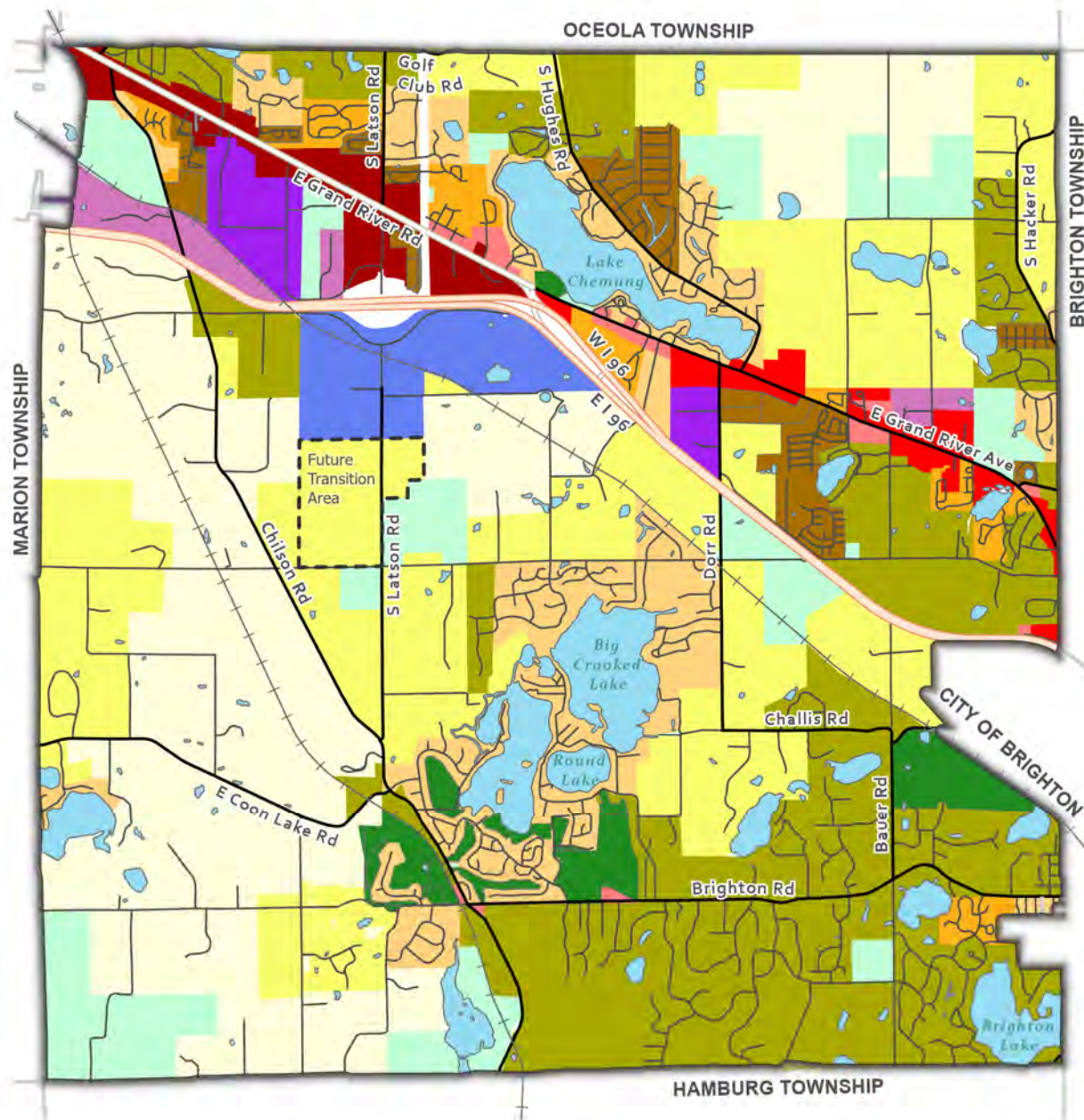
This district will reach from the I-96 interchange at the east end to the western boundary of the Township, west of Golf Club Drive. This area is envisioned for a higher intensity of commercial and residential uses than the East Grand River District. Currently developed with general commercial and office along Grand River, this area is intended to continue to promote these uses that are supported by area and regional residents as well as pass-by traffic along Grand River Avenue, including interchange traffic from I-96. Buildings of one- to three-stories are envisioned, with higher and larger buildings set back from single family residential. Residential uses could range from attached units to stacked flats and will contribute to the workforce and customer base for the district.



MAP 3.1. CHANGES TO FUTURE LAND USE MAP



MAP 3.2. FUTURE LAND USE PLAN



The Future Land Use Map, along with the entire Master Plan document, is a policy guide for local land use decisions. The boundaries reflected on the map are general and are not intended to indicate precise size, shape, dimensions or individual parcels. In addition, where the Future Land Use Map and the Zoning Map are not in alignment, it does not necessarily suggest that that rezoning is imminent; rather, the Future Land Use Map sets forward recommendations to achieve long-range planning goals.

- Ag/Country Estate
- Large Lot Rural Res
- Low Density Res
- Small Lot Single Family Res
- Med Density Res
- High Density Res
- Neighborhood Commercial

giffels
webster

- Mixed Use - East Grand River
- Mixed Use - West Grand River
- Industrial
- Research and Development
- Interstate Campus
- Public/Institutional/Utilities

- Private Recreation
- Interchange Transition Area - future land use and the utility service area will be reconsidered in this area concurrent with a proposal for actual campus uses (see Appendix)

FUTURE LAND USE
GENOA TOWNSHIP

Growth Area Boundary

The 2013 Master Plan establishes a growth boundary. Areas within the growth boundary include the Grand River Avenue/I-96 corridor between Brighton and Howell and areas surrounding the City of Brighton. This section includes the relevant text from the previous plan. The growth boundary is not intended to be static, but should be evaluated on a regular basis. In the future, the Township should consider updating the growth boundary based on the criteria listed in the following page.

At this time, there is considerable development pressure along Latson, south of the primary growth area to Crooked Lake Road, but the Township is not ready to extend the primary growth area nor infrastructure at this time. This is an area to be reviewed in the next 5-year review of the Master Plan.

The residents of Genoa Township have consistently said that preserving the natural beauty of the Township and controlling urban sprawl are important priorities for planning the community. The Township also desires to be able to provide efficient infrastructure services to support development. One of the most effective ways to meet both of these goals is with a “growth boundary.”

The growth boundary concept in the plan is designed to encourage the following:

- Efficient Land Use,
- Protection of farmland and natural areas,
- Efficient provision of utilities, services and infrastructure,
- An efficient transportation system,
- Locations for economic growth, and
- Diverse housing options.

The growth boundary marks the separation between rural and urban areas and defines land that can efficiently support urban services such as sewer, water and roads. Secondary growth areas are also provided adjacent to the City of Brighton for low density residential.

Development outside the boundary is not prohibited; however, because public utilities are not available in these areas, development needs to be maintained at a relatively low intensity and the character of development needs to not adversely impact natural features and agricultural uses.

Areas within the growth boundary include the Grand River Avenue/I-96 corridor between Brighton and Howell and areas surrounding the City of Brighton. Land within the growth boundary are separated into two distinct areas:

Primary growth areas are currently served or available to be served by public sewer and water. These areas include single family and multiple family residential at higher densities with public water and sewer, commercial centers, industrial parks and mixed-use centers.

Secondary growth areas do not have sewer and water, but due to their proximity to the cities of Brighton or Howell, are appropriate for infill with low density residential. Typical lot sizes will be around one acre or clustered developments at an overall density of two acres per dwelling.

Rural Reserve areas outside of the growth boundary should be maintained at a relatively low intensity rural character of development that will not adversely impact natural features and agricultural uses.

There is presently vacant or under-utilized land within the growth boundary that can be served by public water and sewer. By focusing new development in these areas, the Township and the County can more efficiently provide the necessary infrastructure to support new growth.

Planned development. This Master Plan Update plans for a mix of uses along Grand River, all of which is located inside the growth boundary and currently has the public utility and transportation infrastructure to support development. This higher density corridor will form compact, walkable areas for housing, shopping, employment, cultural and recreational activities.

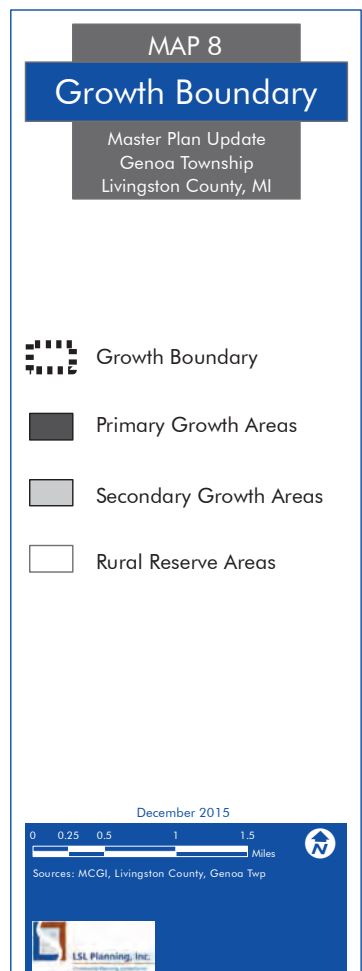
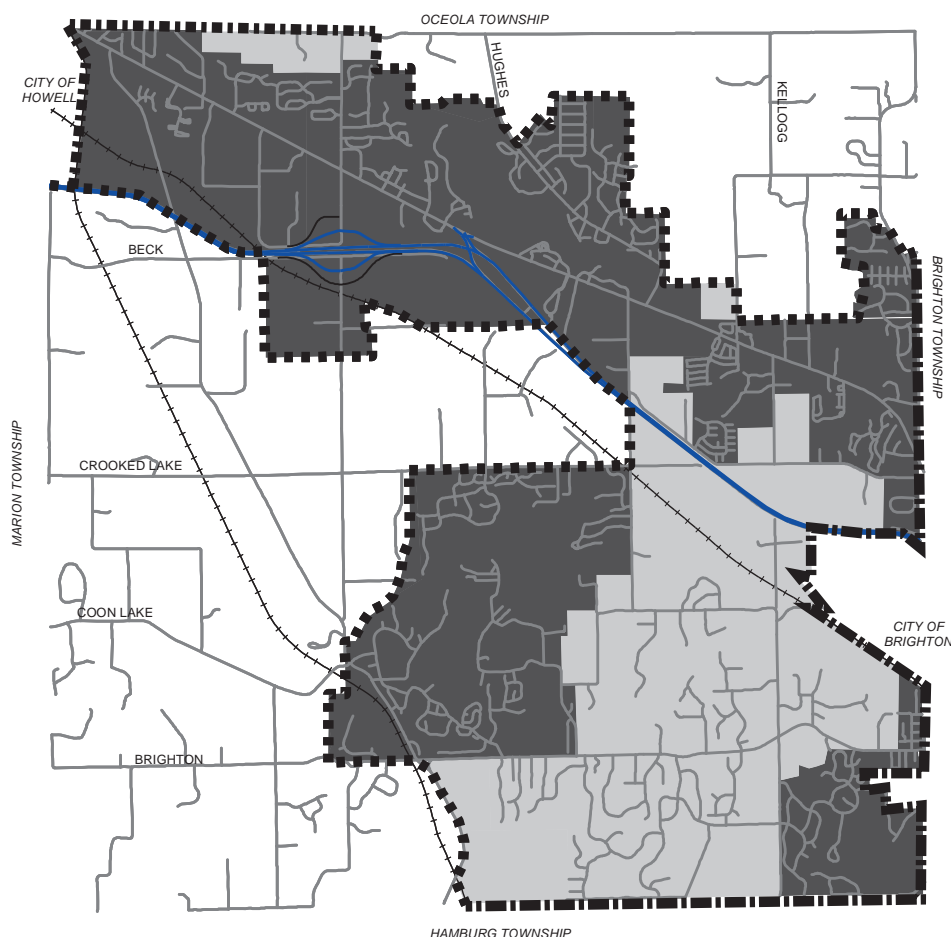
An extension of utilities south of I-96 to the Latson subarea was a determining factor in the planned Land Uses for that area. After the interchange is completed, the area should be monitored annually for potential development and proposed expansion of the growth boundary south. This intent is supported by the associated zoning standards. These standards include evaluation factors to allow for expansion as the Township feels is appropriate.



Criteria for updating growth boundary

- Amount and capacity of undeveloped or under-developed land currently within the growth boundary, which should be used to satisfy the demand for development prior to expanding the boundary.
- Projected population growth within the Township and demand for other land areas for commercial or industrial development.
- The ability to extend public water and sewer to serve new land areas outside of the growth boundary.
- The capacity and condition of the road system to support the new growth areas.
- The ability of the Township, County and other public agencies to provide necessary services to the new growth areas and the additional resulting population.
- The impact of higher density development from expanding the growth boundary will have on natural features, agricultural uses and rural character.
- Consistency with the goals and objectives of the Master Plan.

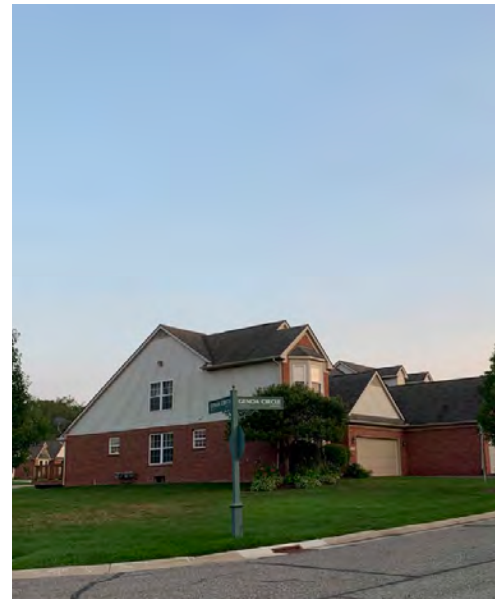
MAP 3.3. 2015 GROWTH BOUNDARY



Housing Plan

Housing Plan

The overall intent of the Housing Plan is to outline a strategy to ensure that the housing needs of Township's current and future residents will be met. The Housing Plan refines the residential Land Use designations identified in the Land Use Plan.



Current Housing

Housing represents the strength of the local economy and overall community appeal. Older housing reflects the physical, historic and social context of a community. The age of housing influences local housing policies for rehabilitation and redevelopment. Older houses require additional maintenance and upkeep, and may also require upgrades to ensure energy efficiency, barrier free access and increased livability for aging adults. In 2018, of the Township's 8,732 housing units, 78% were owner-occupied, 16% were occupied by renters and 6% remained vacant. This is consistent with the county rates (see table)

Housing Age

Most householders moved into their homes between 2010 and 2014 (28.9%), followed by 2000 to 2009 (22.5%) (See Chart below). The inflow of new householders drastically dropped from 2016 to a low of 4.4% in 2017. This corresponds with the age of housing in Genoa. Most of the houses in the Township are older than 30-40 years old, a majority being built during the years 1980 to 1999. Housing construction almost stopped since 2010.

FIG.3.1. YEAR HOUSEHOLDER MOVED: GENOA

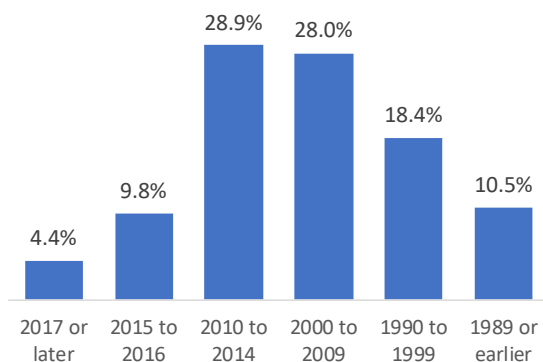
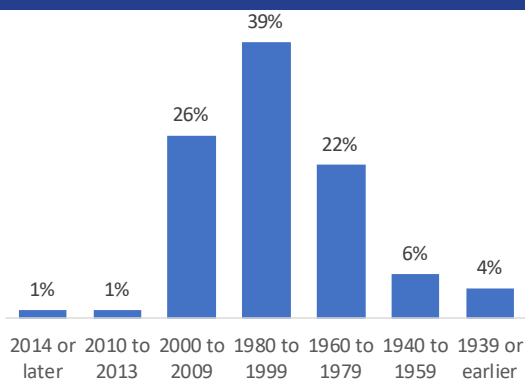


FIG.3.2. YEAR HOUSING BUILT: GENOA



Source: SEMCOG Community Profiles

Housing Types

Single-family detached housing is the predominant housing type in the Township, making up 66 % of all units. See the image below for more details. Since 2010, the number of single family homes increased while the other type of housing reduced. However, the change in both cases is insignificant.

FIG.3.3. HOUSING TYPES: GENOA

Single Family Homes



66%

2018: 5,795
2010: 5,548

Multi-Family Homes



23%

2018: 2,020
2010: 2,088

Mobile Homes or Other



11%

2018: 917
2010: 978

Housing Value

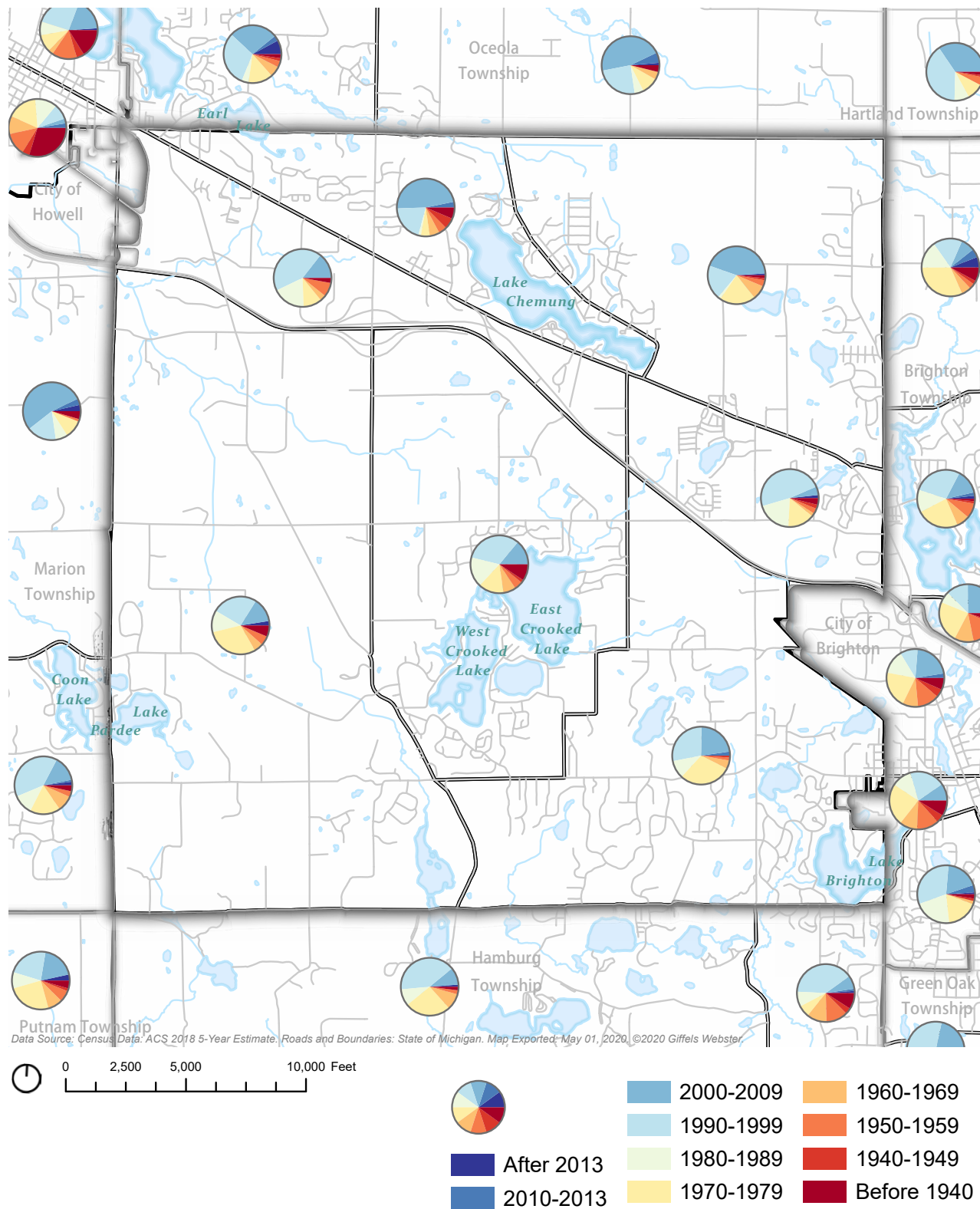
The median housing value in 2018 in Genoa Township was \$259,800 (see Table). The Township has seen a reduction of 3.6% in housing values since 2010. The Township housing and rental rates are comparable to surrounding communities. The median housing value is 78% higher than the state.

TABLE 3.1. HOUSING DATA: SURROUNDING COMMUNITIES

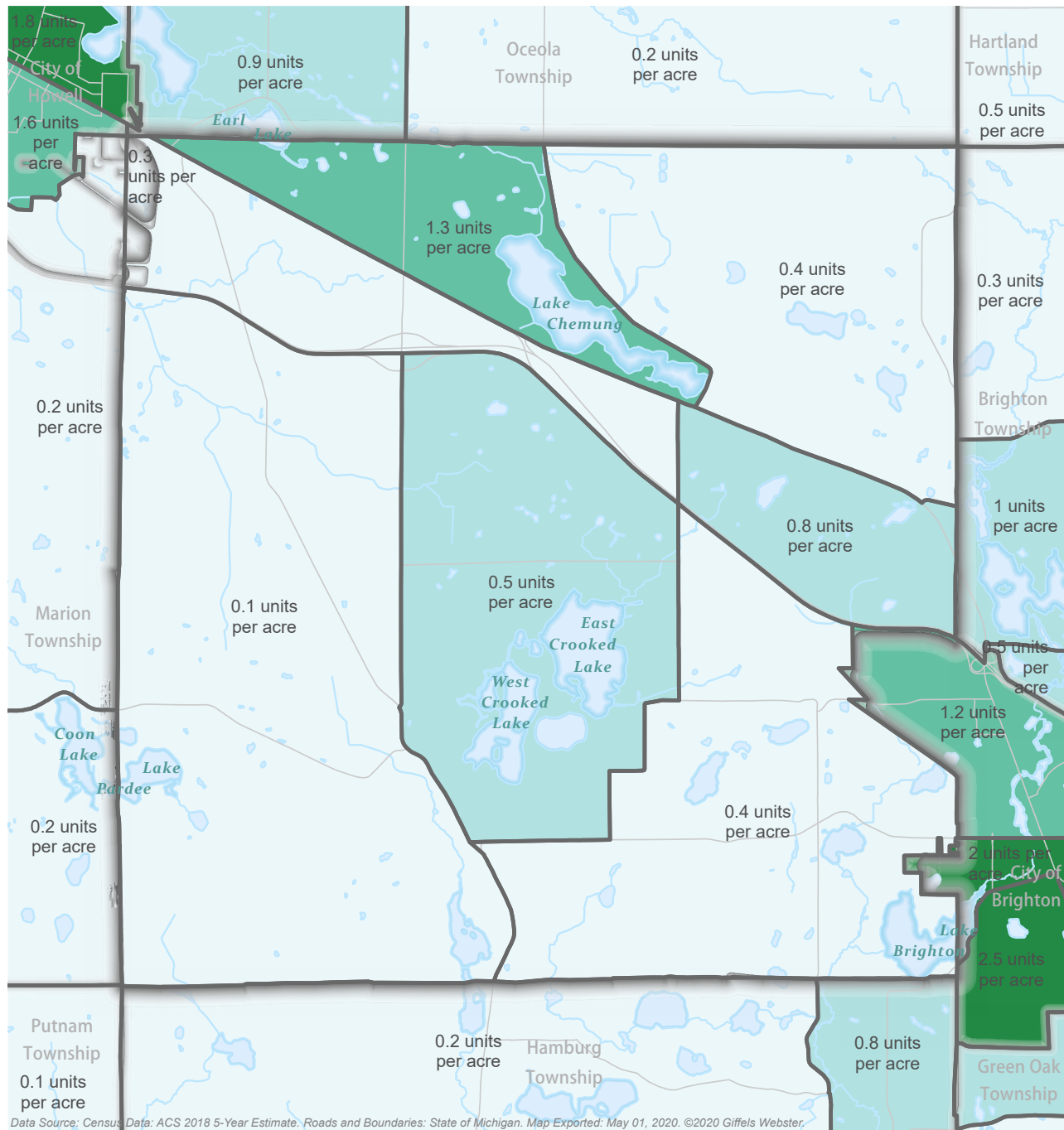
	Owner-Occupied housing unit rate, 2014-18	Median value of owner-Occupied Housing units, 2014-18	Median gross rent, 2014-18
United States	64%	\$204,900	\$1,023
Michigan	71%	\$146,200	\$850
Livingston County	85%	\$233,400	\$1,011
Genoa Township	83%	\$259,800	\$1,101
Oceola Township	90%	\$239,700	\$1,209
Brighton Township	96%	\$278,300	\$1,130
Brighton City	60%	\$194,600	\$1,005
Hamburg Township	93%	\$244,300	\$1,017
Marion Township	94%	\$244,300	\$1,017



MAP 3.4. AGE OF HOUSING



MAP 3.5. HOUSING DENSITY



0 2,500 5,000 10,000 Feet

Housing Forecast

The Chesapeake Group conducted a market survey throughout 2020 and early 2021 to understand both current and future market conditions for residential and non-residential activity. Refer to 'Market Assessment Summary' on page for more details. The market assessment that followed the survey included some key housing data and future projections of housing demand.

As part of the current Master Plan update, an open house was conducted on November 10, 2021, at the Township Hall. Among other topics, the attendees were asked about their thoughts about future housing developments within the Township. There is a clear support for diverse housing in general within the Township such as cottage court style and attached townhomes.

The primary factors that contribute to housing demand are housing affordability and demographics shifts. Proximity to employment and better school districts also impact the housing demand. While the demand for single family homes is constant for families with kids, the demand for missing middle housing for aging population is growing, which is consistent with national trends.

According to the market survey, about thirty seven percent of total respondents, anticipate a possible move to a different house in the next five years, unlikely outside of Michigan. The primary reason for moving is either trying to downsize (those with primary income earners 55 years of age or older) or growing families or those who are ready to move out of their current home to create a separate household. The total population of older people aged between 64-85 is projected to increase by 104% by 2045 from 2015. This is a significant number that would be looking to downsize.

According to the assessment, approximately between 100 and 200 new non-single-family housing units could be added to the rooftops within the Township. The demand forecast is not a simple estimate of what is expected to be built in Genoa Township but are rather an estimate of what could be built in the market based on forecast demand; The new housing units would be geared toward independent living for seniors and young households, with the latter containing workspace. Included could be semi-detached, townhome, duplex, and other related units. The units' locations should contribute to walkability and serve existing residents who would move to a previously defined scaled smaller unit from within the Genoa area. Such new units would most likely free up existing units to attract younger households.

Missing Middle Housing

“Missing Middle” housing” is a term coined by Daniel Parolek of Opticos Design, Inc. in 2010. Parolek defines this type of housing as follows:

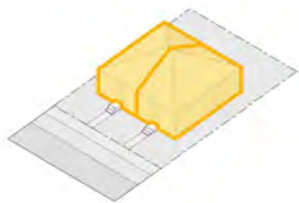
“Well-designed, simple Missing Middle housing types achieve medium-density yields and provide high-quality, marketable options between the scales of single-family homes and mid-rise flats for walkable urban living. They are designed to meet the specific needs of shifting demographics and the new market demand and are a key component to a diverse neighborhood. They are classified as “missing” because very few of these housing types have been built since the early 1940s due to regulatory constraints, the shift to auto-dependent patterns of development, and the incentivization of single-family home ownership.”

Missing Middle Housing is a range of multi-unit or clustered housing types compatible in scale with single-family homes that help meet the growing demand for walkable urban living. Characteristics of these housing types include:

- Walkable (homes are set in walkable context)
- Medium density but lower perceived density
- Smaller, well-designed units
- Smaller footprint and blended densities

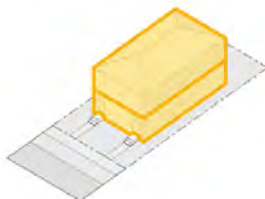


Missing Middle Housing Types



Duplex Side-by-side

A small (1 to 2-story), detached structure that consists of two dwelling units arranged side-by-side, each with an entry from the street. This type may include a rear yard.



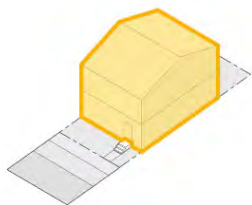
Duplex Stacked

A small (2 to 2.5-story), detached structure that consists of two dwelling units arranged one above the other, each with an entry from the street.



Fourplex Stacked

A detached (2 to 2.5-story) structure with four dwelling units, two on the ground floor and two above, with shared or individual entries from the street. This type may include a rear yard.



Attached Townhouse

A small-to medium-sized attached structure that consists of 2 to 16 multi-story dwelling units placed side-by-side. Entries are on the narrow side of the unit and typically face a street or courtyard.



Cottage Court

A group of small (1 to 1.5-story*), detached structures arranged around a shared court visible from the street. The shared court is an important community-enhancing element and unit entrances should be from the shared court. It replaces the function of a rear yard.



Courtyard Multifamily

A medium-to-large sized (1 to 3.5-story*) detached structure consisting of multiple side-by-side and/or stacked dwelling units oriented around a courtyard or series of courtyards. The courtyard replaces the function of a rear yard and is more open to the street in low intensity neighborhoods and less open to the street in more urban setting.



Multiplex Medium.

A detached (2 to 2.5-story) structure that consists of 5 to 12 dwelling units arranged side-by-side and/or stacked, typically with a shared entry from the street.



Triplex Stacked.

A small-to-medium (3 to 3.5-story) sized detached structure that consists of 3 dwelling units typically stacked on top of each other on consecutive floors, with one entry for the ground floor unit and a shared entry for the units above.

Data & Image source: Opticos Design, Inc.

Current Development Patterns

Genoa Township has longstanding interest in preserving and maintaining natural features and open spaces. The zoning tools that are available to maintain rural character within low-density residential areas include ones that encourages cluster and open space developments with a modest reduction in lot sizes and larger green buffers between the lots and the roads rights-of-way. The Township also recognizes the need for allowing for diverse housing within the community. The current zoning ordinance encourages two-family duplex homes where appropriate. Medium-density and higher-density districts allow for townhomes and apartment buildings. The density varies for medium/high-density districts vary from 5 to 8 units per acre. The ordinance allows for flexibility in design standards with a residential planned unit development, but this does not necessarily allow for an increase in density. Well-planned and designed residential developments are not always defined by density alone and the Township may wish to explore refining the PUD standards for additional flexibility.

The market analysis results indicate an increasing demand for smaller units in walkable settings for current residents in order to downsize. The table below provides a summary of recommended housing styles in applicable future Land Use categories. Minimum density for developments should be guided by the building form, open space standards and other design features consistent with the underlying zoning. Such flexibility in housing styles would allow for residents to age in place. It is noted that these housing types may be inconsistent with lake lots as they are typically smaller in size.

TABLE 3.2.MISSING MIDDLE HOUSING- USE RECOMMENDATIONS

	Large Lot Rural Res	Low Density Res	Small Lot Single Family	Med Density Res	High Density Res	Grand River East	Grand River West
Duplex Side-by-side			Y	Y	Y	Y	Y
Duplex Stacked				Y	Y	Y	Y
Fourplex Stacked				Y	Y	Y	Y
Attached Townhouse				Y	Y	Y	Y
Cottage Court			Y	Y	Y	Y	Y
Courtyard Multi-family				Y	Y	Y	Y
Multiplex Medium				Y	Y	Y	Y
Triplex Stacked				Y	Y	Y	Y

Applying Missing Middle Housing Strategies

The majority of existing Land Use in Genoa is rural residential (40.7%). Single-family housing occupies another 16 percent. Less than five percent is reserved for multiple family development along the Grand River corridor. The Township intends to preserve the agricultural/low-density areas south of Grand River Avenue. There is limited potential to meet the future needs of missing middle housing within existing residential districts. The Township may consider a permitting duplex and cottage court style housing within small lot single family districts to increase affordable housing stock, in appropriate locations, where additional density is supported by infrastructure and transportation facilities. More multi-family options in areas that are currently reserved for office development or underutilized for commercial development will help increase housing stock in the Township. The future Land Use plan recommends creating mixed-use districts along the Grand River corridor.

Accessory Dwelling Units Recommendations

In neighborhoods with designs reflective of later suburban development styles, where attached garages are more typical, accessory dwelling units may be more appropriately permitted as additions to the principal home. In either case, owner occupancy of one of the units should be required. The Township may also consider phasing these units in by permitting only a small number per year to observe implementation and fine-tune its regulations accordingly.

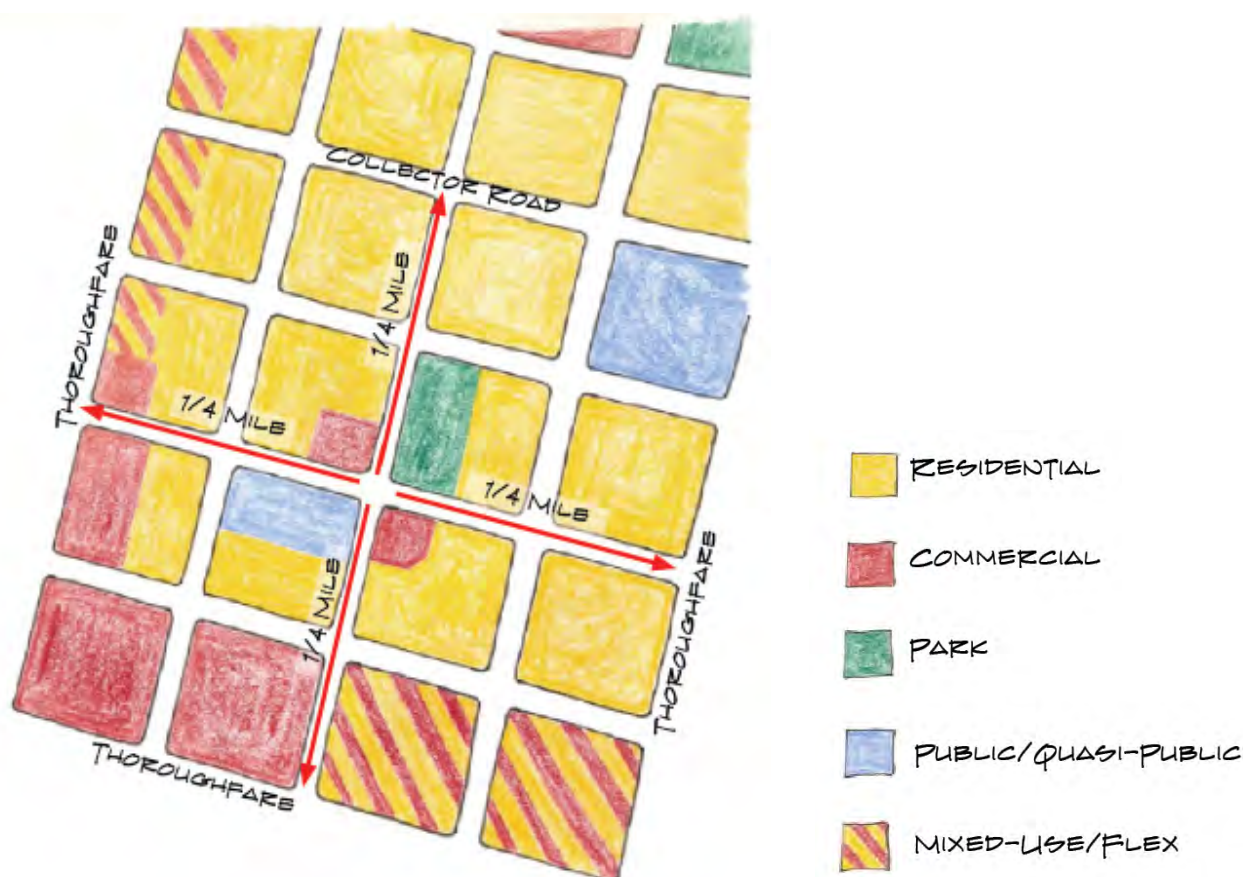


Traditional Neighborhood Development

Planning in the late 20th Century tended to emphasize the total separation of residential and non-residential uses. This led to a sprawling, auto-dependent development style that requires the use of a personal vehicle to accomplish even small daily errands. Modern planning often envisions **Traditional Neighborhood Development (TND)** as a method for developing new neighborhoods and communities in the style of a traditional village, with amenities in easy walking distance from most homes.

However, the same principles that guide TND in a new development context can also be used to guide infill development and redevelopment. In establishing its vision for complete neighborhoods, the plan recognizes that the non-residential uses that are desirable in neighborhoods are those that most directly serve the local residents of the neighborhood. Many of these same uses, such as corner shops, may also provide employment for people who live nearby. High intensity residential developments can support neighborhood commercial businesses as well.

FIG.3.4. TRADITIONAL NEIGHBORHOOD UNIT CONCEPT



Above figure illustrates in a generalized way how uses may mix in a traditional neighborhood, with a park and public or quasi-public use establishing a center with small-scale convenience uses. Thoroughfares at the edge of the neighborhood serve as boundaries, with more intensive non-residential uses along these roads. The neighborhood is roughly half a mile across, which provides for a ten-minute walk from end to the other. This is a general guideline and will not apply neatly to all neighborhoods.

Attainable Housing

When communities have a wide spectrum of housing options to support residents, they can accomplish many goals. The availability of “attainable” housing helps accommodate everyone from young adults who are just beginning to live on their own, to families looking to grow, to older residents looking to downsize while staying in the community. It also provides for workforce housing. While there is no universal definition of “attainable housing,” the term was recently defined by the Urban Land Institute as “nonsubsidized, for-sale housing that is affordable to households with incomes between 80 and 120 percent of the area median income (AMI).”

Overview

In many communities, young adults and the elderly have limited housing options due to a combination of their lower income levels along with the pricing and availability of housing. This kind of financial challenge can impact people of all ages.

The general rule of thumb based on guidance from the U.S. Department of Housing and Urban Development is to spend a maximum of 30% of a household’s income on housing costs, yet many people find themselves spending more on housing, leaving less of their income available for other household expenses. Finding attainable housing can be challenge and it can stress family finances.

The figure below demonstrates that nearly half of all renter households and about a quarter of owner households are cost burdened. Cost burdened is defined as households spending more that 30 percent of income on housing. In 2001, only slightly more that 40 percent of renters were cost burdened.

FIG. 3.5. ATTAINABLE HOUSING



Source: Joint Center for Housing Studies at Harvard University, *The State of the Nation's Housing 2018*

Housing Costs and Supply

Housing costs are on the rise. According to the National Association of Home Builders, the median price of a new-construction home was \$375,000 in April 2020, up from \$325,100 in October 2018. The median price for existing homes was \$280,600, up from \$257,500 in 2018. The cost of new construction is driving the overall cost of housing higher.

The supply of multifamily for-sale housing is decreasing. Multifamily for-sale housing has historically represented about 20 to 25 percent of total multifamily permits. This type of housing is often more attainable because of its lower cost. In the past 8 years, multifamily for-sale housing has represented 6 to 7 percent of total permits, reflecting a significant post-Great Recession decline.

New construction has delivered larger homes with more bedrooms even though household size was dropping. “Although one- or two-person households make up more than 60 percent of total households, nearly 50 percent of the homes delivered are four bedrooms or more. Less than 10 percent of the homes offer fewer bedroom options like one and two bedrooms,” as noted by ULI.

The same ULI report notes that small housing, under 1,400 square feet, has historically represented about 16 percent of new construction, but in the last cycle, it has averaged closer to 7 percent. When combined with the next size category, 1,400 to 1,800 square feet, the overall distribution of “small homes” has declined from just under 40 percent to 22 percent. Homes over 2,400 square feet have increased from 32 percent to 50 percent of new construction since 1999, according to the ULI .

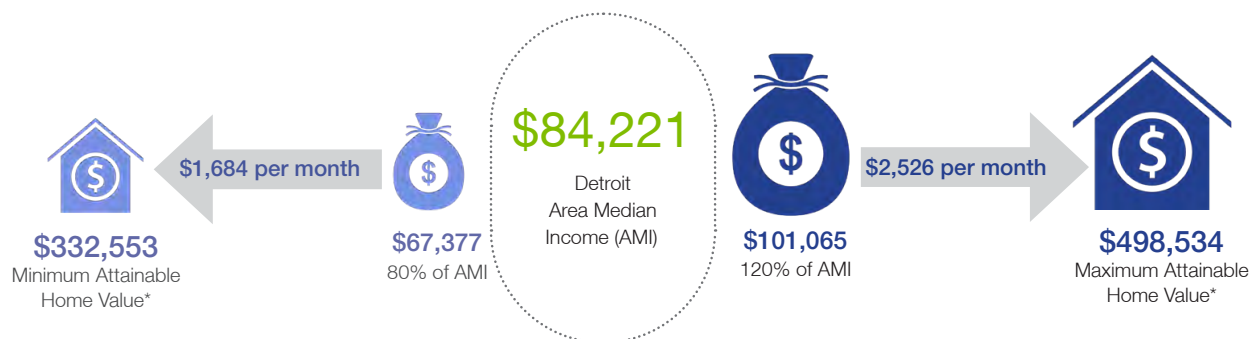
Urban Land Institute (ULI) is a leading provider of research and analysis on issues that affect housing .<https://bit.ly/AttainableHousing-ULI>

What does this mean for Genoa Township?

As noted above, attainable housing has been defined as nonsubsidized, for-sale housing that is affordable to households with incomes between 80 and 120 percent of the area median income (AMI).” The Livingston County 2019 median household income was \$84,221. The numbers below and in Figure 18 are based on providing attainable housing in the Livingston County regional market:

- **MINIMUM VALUE.** 80% of the median family income = \$67,377. With 30% of income spent on housing, \$1,684 per month is available. A home loan valued about \$332,553 (based on 4.5% interest and 30 year mortgage) is attainable at this income level.
- **MAXIMUM VALUE.** 120% of the median income = \$101,065. With 30% of income spent on housing, \$2,526 per month is available. A home valued about \$498,534 (based on 4.5% interest and 30 year mortgage) is attainable at this income level.

FIG. 3.6. ESTIMATED ATTAINABLE HOME VALUE FOR GENOA TOWNSHIP



While housing alone is traditionally deemed affordable when consuming no more than 30% of income, the Center for Neighborhood Technology's Housing and Transportation Index (H+T Index) incorporates transportation costs—usually a household's second-largest expense—to show that location-efficient places can be more livable and affordable. It is suggested that transportation expenses total less than 15% of household income. The H +T Index calculates a variety of costs associated with transportation and includes car ownership and car use. Based on the expected miles driven per year for the area (25,000), an average of \$3.50 per gallon and a annual auto ownership cost of \$12,236 per vehicle, the H+T index estimates approximately \$16,300 per vehicle. Using the county's median income noted on the previous page, this transportation cost is approximately 20%.

The Master Plan addresses attainable housing by targeting a wide variety of housing options that go beyond single-family detached housing. Examples include multi-family dwellings, manufactured housing, and missing middle housing types, which are house-scale building with multiple units (duplexes, quadplexes and cottage court bungalows). This variety of housing types will expand the number of homes available across many price points.

Additionally, reducing the minimum square footage of requirement for new homes will provide builders and buyers with more variety, including small footprint homes that cost less to acquire and maintain.

Finally, providing opportunities for job creation and workplaces near residents may allow some residents to reduce their miles driven per year, making living in Genoa Township more affordable.

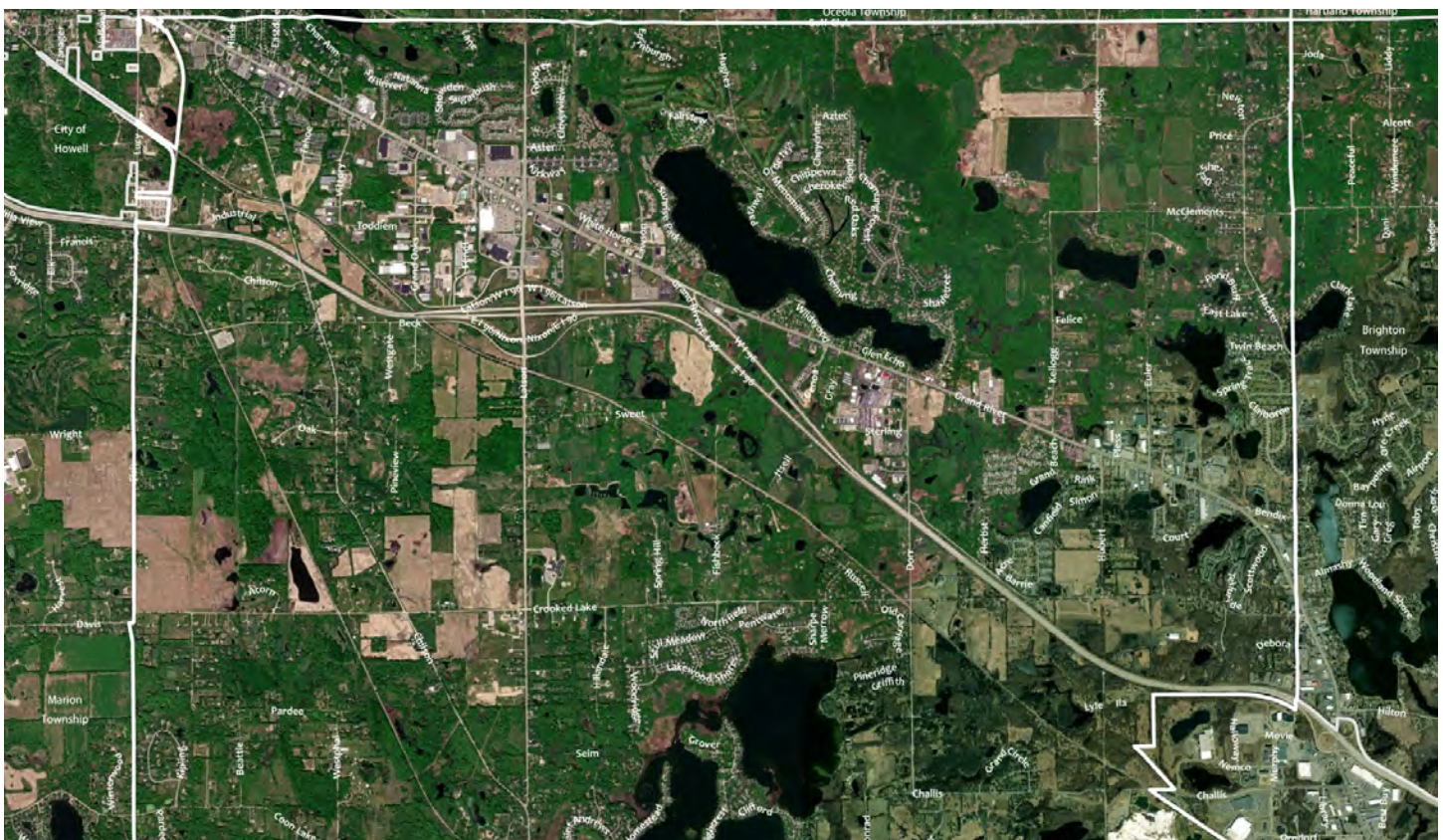
Commercial Corridor Redevelopment

Commercial Corridor Development

Economic development goals and policies are often found in community Master Plans. They provide general guidance, and some may include detailed action strategies to target specific geographic areas or programs. In Genoa Township, there is a history of focusing development and economic activity in and around the Grand River Corridor. This remains desirable – to make best use of existing infrastructure, build upon the successes of existing development and to provide opportunities for development where it is desired, alleviating development pressure in other parts of the Township.

This chapter is divided into three sections: Market Opportunities, Grand River Corridor Redevelopment and Redevelopment Sites. The Market Opportunities section will present opportunities for Genoa Township and begin to identify action strategies to capitalize on those opportunities. The Grand River Corridor Redevelopment section will present an overall vision for the redevelopment of the corridor. These first two sections provide the foundation for the final section that takes three sites and offers strategies for development that is consistent the overall goals of this Master Plan.

FIG. 3.7. GRAND RIVER AVENUE CORRIDOR - AERIAL IMAGE



Market Opportunities

The Market Assessment chapter summarizes existing conditions and provides an economic forecast. The forecasting methods used here, which model a potential range of marketable opportunities in commercial, office, and residential space, rely on property trends, historical, local and regional data, and a survey of area residents conducted during the summer of 2020. While this survey took place in the early months of the COVID-19 health pandemic, respondents were prompted to consider activity pre-COVID. The assessment also considers the overall Genoa market and its potential growth to determine how much of the potential economic activity that could occur inside the Township may be occurring outside of the Township.

It's important to note that economic conditions continue to change; in most cases, generally speeding economic trends already impacting the economy before COVID-19. Purchasing online was growing rapidly prior to COVID-19, resulting in the exportation of dollars; the online purchasing rate sped up since the pandemic. Large proportions of office and workspace were being built in or simply moved to homes, and more people were working from remote locations before COVID-19; as with spending habits, the speed of change has accelerated. This is important context for understanding all forecasting numbers in this plan. The demand forecasts are not a simple estimate of what is expected to be built in Genoa Township but are rather an estimate of what could be built in the market based on forecast demand; The Township will capture some fraction of this. No community will capture all marketable activity and space.

FIG. 3.8.MARKET OPPORTUNITIES



Housing

Between 100 and 200 new non-single-family housing units could be added to the rooftops within the Township. The new housing units would be geared toward independent living for seniors and young households, with the latter containing workspace. Included could be semi-detached, townhome, duplex, and other related units. The units' locations should contribute to walkability and serve existing residents who would move to a previously defined scaled smaller unit from within the Genoa area. Such new units would most likely free up existing units to attract younger households.



Retail goods and services

The survey indicates an opportunity to diminish the exportation of dollars from Genoa Township residents, particularly in food, food services, and linked entertainment activity. **Genoa Township residents are expected to support between an additional 300,000 and 326,000 square feet of retail goods and related services space by 2030.** Most commercial opportunities are appropriate for land/parcels/structures associated in and around Grand River Avenue and I-96.



Multi-tenant office space

New office space demand is sufficient to generate between 20,000 and 30,000 square feet of space, accommodated in vacant space, new development, and homes. The opportunity does not include those in the health care arena, such as outpatient infusion or surgery centers, or inclusion of higher educational institution space in Genoa Charter Township.

Grand River Corridor Redevelopment

Housing

To hold the existing residents and provide them with the opportunities they seek for living conditions; Genoa Township needs to ensure that development regulations afford the opportunity and foster in strategic locations housing for smaller units in a walkable environment.

Providing for densities supportive of townhomes, duplexes, and related physical forms and condominium or other non-traditional ownership positions allows for mitigation of the physical need and cost or burden on the individual household. Should an active adult community be acceptable to Genoa, the development would likely be between 700 and 1,500 housing units. The product would be primarily independent living but could support aging in place within the same development. This development would potentially pump millions of new dollars into the local economy, creating an increased demand for retail activity, including restaurants, and professional services. This increased demand would expand the opportunity for entrepreneurship and grow the labor force, attracting younger households. The East Grand River Area could be marketed as a “health hub,” serving older residents and businesses that support healthy living for all Genoa Township residents.

Commercial

While the pandemic and ongoing labor market shortages are impacting restaurants, the preservation of existing restaurant kitchens is key to reinvigorating the market as soon as COVID-19's impact wanes and the industry rebounds. The Township should work with property owners and restaurateurs to maintain kitchens, facilitating reopening or sales when the market returns. Outreach to hospitality and culinary programs and affiliated schools could facilitate a transition and assist with re-marketing the facilities and properties.

Genoa Township can differentiate itself from Brighton and Howell and generate excitement and activity through furthering pop-up space and incubator development. Off-street parking can be used to create temporary pop-up spaces that can spur outside visitation and entrepreneurship.

Temporary pop-up storefronts in stand-alone or strip commercial can also play a role in filling vacancies as they happen. Cargo trailers, sheds, and tents have all been used to create temporary spaces – and can be done in ways that look intentional, rather than ramshackle. In addition, big box and large-scale commercial buildings could be repurposed and divided myriad ways to support a variety of small businesses, from retailers to other business support services.

Local Capacity investment

One of the biggest challenges for any start-up or growing business is access to capital. While banks, credit unions and other financial institutions can provide a traditional source of capital, new opportunities to raise funds exist through crowdfunding. This means building investment funds from a “crowd” of people and is especially important for women, people of color, startup businesses and those with little or a less than perfect credit history.

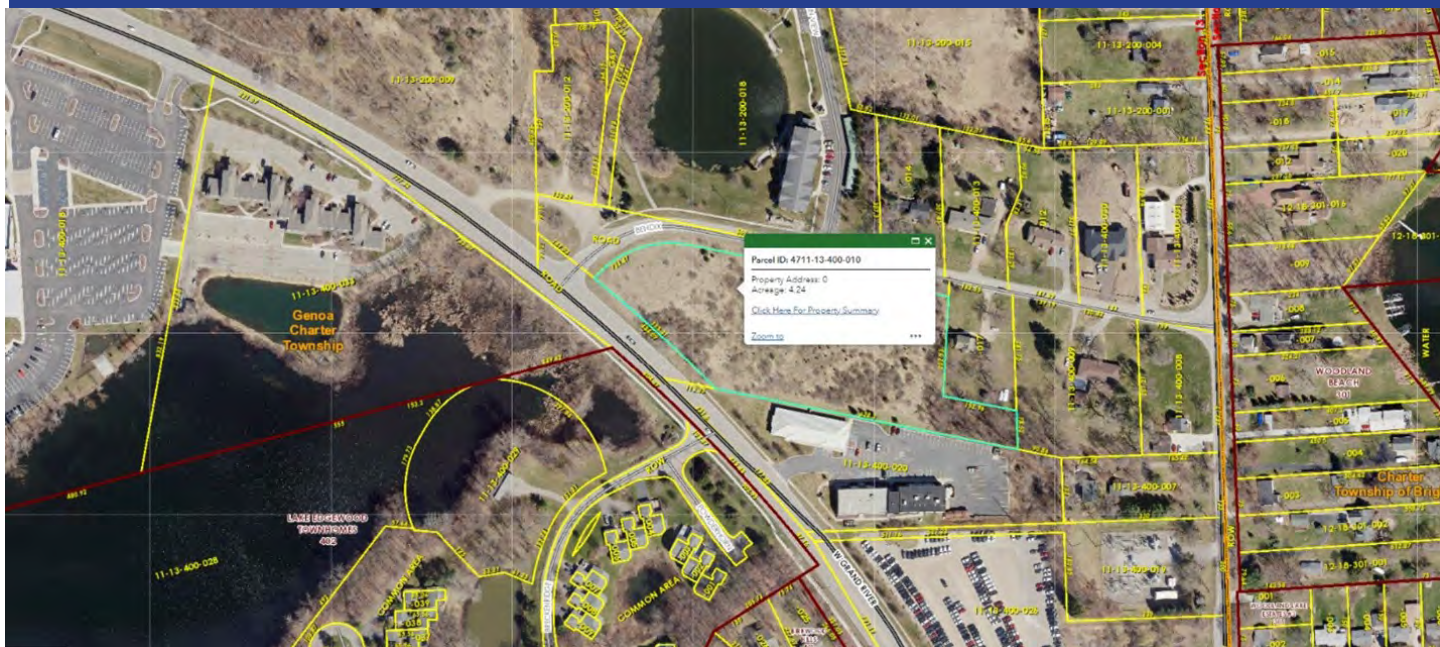
Most people are now aware of donation-based crowdfunding like Go-Fund-Me, in which people make a donation to support an individual, group or activity with no expectations of a return on that donation. Reward-based crowdfunding platforms like Kickstarter encourage donations in exchange for “perks” or other products. In contrast, an investment-based crowdfunding opportunity allows investors to invest in privately-owned businesses who offer a security through the Securities and Exchange Commission (SEC). There are federal regulations that support this type of investment. In Michigan, the Michigan Invests Locally Exemption (MILE), allows small businesses to raise capital by reaching out to Michigan residents to invest in their companies.

Another option employed by more than a handful of communities in Michigan is to form a local investment group that can purchase, invest, and inject dollars into projects where the investors can become partners or make loans to entities to facilitate investment. This is better managed on a smaller scale and may be more attractive than MILE due to lower reporting and SEC requirements.



Redevelopment Sites

SITE 1: GRAND RIVER @ BENDIX



Background

Location

The site is located on Grand River Avenue, on the southeast side of the intersection at Bendix Avenue, near the east end of the Township. The 4.24-acre site is currently vacant and is zoned OS - Office Service. Parcels south of this site are developed with office uses, with an automobile dealership and other auto-related uses further south, leading to the Grand River/I-96 interchange. There is an apartment complex to the north, across Bendix, and an attached single-family development south across Grand River Avenue.

Future Land Use.

In the previous Master Plan, this area was designated Office and envisioned various forms of office uses, including professional, medical and financial. However, with this Master Plan Update, this area is designated as mixed use, given the adjacency of the general commercial to the south and multifamily to the north.

Redevelopment Concept

This site presents an opportunity to integrate a mix of uses on site within the context of a larger district. The medical/office campus to the north along Grand River, multifamily directly north, single family to the east and office/commercial to the south make this site an ideal area for a mixed-use transitional development. The market study indicated demand within the Township could support development between 700 and 1,500 assisted living housing units. The market study also suggested that new office space demand in Genoa Township is sufficient to generate between 20,000 and 30,000 square feet of space, accommodated in vacant space, new development, or within homes (work from home). Given the proximity to the medical and residential uses just north/west along Grand River, this site presents an opportunity to support new office or commercial space in a compact, walkable development anchored by larger users like the St. Joseph Mercy Brighton Health Center. A mix of uses that includes senior-focused housing could be combined with other uses to serve those residents.



Building Form

Mixed use developments can take many different forms, including vertical mixed use that “stacks” uses among multiple stories in a building or buildings (left), as well as horizontal mixed use, which organizes uses in multiple building on a single site. Both development types should include project specific regulations designed to properly balance uses on site, provide pedestrian and vehicular connections, include shared open space or public spaces and recognize the importance of flexible parking requirements. Intentional site design to maximize the mobility of older residents should include safe, convenient and comfortable sidewalks and pathways, adequate lighting, barrier-free access to site furnishings such as benches, and bicycle parking.



Transportation

All parts of the site should be served by a shared use pathway that connects to adjacent sidewalks/pathways, roadways and sites. It is anticipated that vehicular access will tap into the existing street network on both Grand River and Bendix.

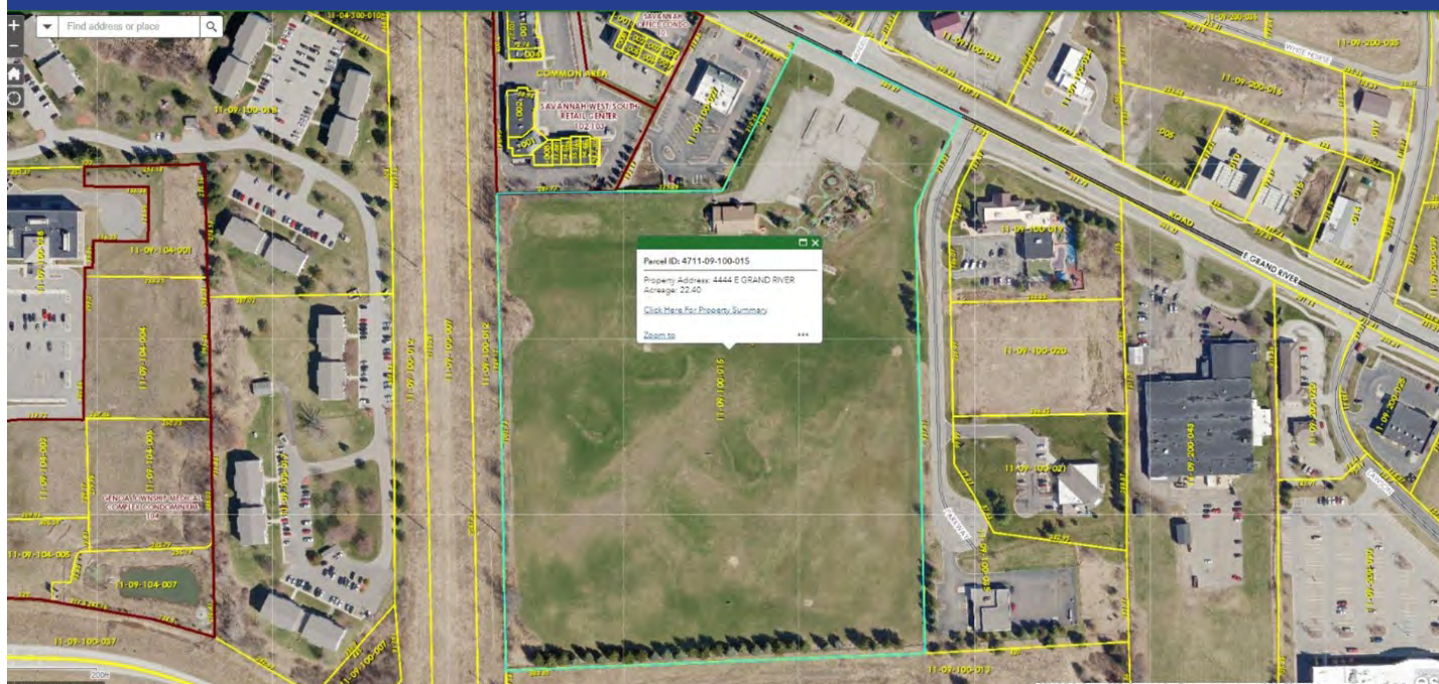
Sustainability

Development on this site should be based on a framework of sustainable building and site design practices that offers a model for development and redevelopment elsewhere in the Township. The use of low-impact design, pervious paving materials, and native landscape materials should be prioritized.

Development of the District

Zoning for the parcel is currently OS: Office Service district and allows professional and medical office uses; retail and residential uses are not permitted. A new mixed use zoning district should be considered to allow for the flexibility of uses while ensuring that standards are in place to promote quality

SITE 2: GRAND RIVER @ PARKWAY



Background

Location

This site is located on the south side of Grand River Ave west of Parkway Drive and is the site of the former Grand River Golf Range and Putt-Putt. The area around this site is developed with strip-type commercial and auto-oriented uses including fast-food restaurants with drive-throughs and auto-service uses. Some general/regional commercial uses, including Kohls and Tractor Supply, are also located nearby.

Future Land Use.

The previous Master Plan designated general commercial on this site, which envisioned clustered, rather than a commercial strip pattern of development, to create a buffer from nearby residential areas. Suggested uses included larger grocery stores, restaurants and retail shopping centers. This Master Plan Update designates this area as mixed use and anticipates a vertical and/or horizontal mixing of commercial and residential uses. On this site, with its limited visibility to Grand River Avenue, it is expected that this site would best accommodate residential uses.

Redevelopment Concept

Throughout the planning process, Genoa Township residents and officials cited the need to provide opportunities for investment and reinvestment along the Grand River Corridor. In addition, there is a need and desire for smaller housing units in a walkable environment. Given the Township's interest in supporting current and future residents of all ages and abilities, development of this site may provide an opportunity for smaller housing units in a compact, yet natural setting. There are many existing businesses in this corridor that could serve residents' daily needs at a development in this location. Grocery stores, drug stores, and restaurants are within easy reach. Smaller-scale commercial uses that serve the local community could be added as infill development to the east across Parkway Drive in a way that buffers new residential development. Commercial redevelopment of the driving range facility and parking lot could provide goods and services for local residents.



Building Form

Here, a range of housing types is possible, including attached dwellings such as townhomes, row housing as well as stacked dwellings. Residential buildings could be 3-4 stories in height are consistent with the adjacent apartments to the west. New development should be made of high-quality building materials on all sides and provide green space for residents. Commercial development along Grand River should also be comprised of quality materials; while parking may be provided in the front of buildings, pedestrian-scaled buildings and features should be included.



Transportation

The site is proximate to the I-96/Latson Road interchange and affords easy regional access. All parts of the site should be served by a shared use pathway that connects to adjacent sidewalks/pathways, roadways and sites. It is anticipated that vehicular access will maintain access to Grand River and Parkway Drive. Pedestrian connections between existing development and new housing would offer residents the opportunity to walk or bike to many businesses in the corridor. The ability to incorporate physical activity into their daily lives helps residents stay healthy; providing alternatives to driving offers older residents a sense of independence as well.

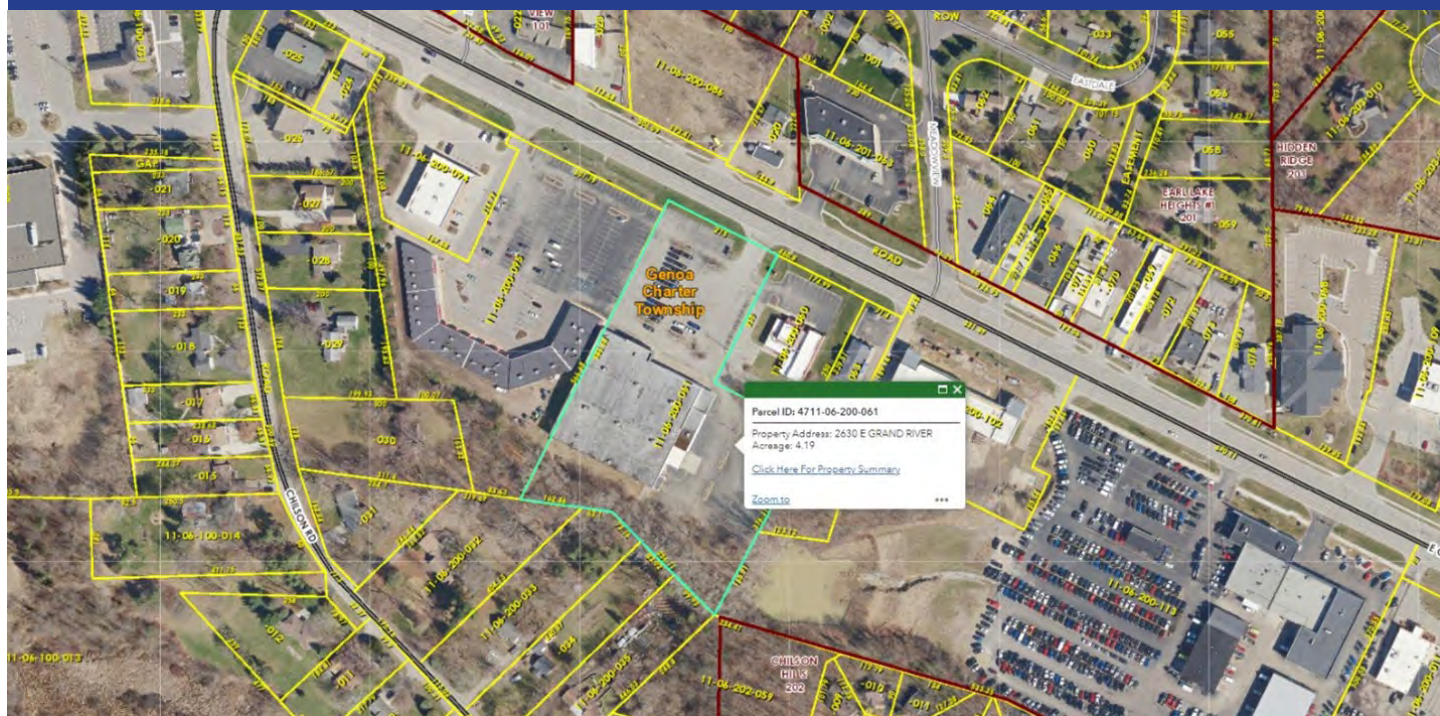
Sustainability

Development on this site should be based on a framework of sustainable building and site design practices that offers a model for development and redevelopment elsewhere in the Township. The use of low-impact design, pervious paving materials, and native landscape materials should be prioritized.

Development of the District

This type of development is currently zoned PRF, which only allows clustered residential development on the same site as a recreational use. This parcel could be rezoned to a new mixed use zoning district, which would allow for the flexibility of uses while ensuring that standards are in place to promote quality materials, walkability and protection of open spaces. The mixed use designation does not necessarily mean that every site should contain a mix of uses, but adjacent parcels should contain compatible uses aimed at promoting walkability for both local residents and regional visitors.

SITE 3: GRAND RIVER @ CHILSON



Background

Location

This 4.19-acre parcel is located on the south side of Grand River, east of Chilson Road. The ~43,000 sq.-ft commercial space is currently vacant and was previously used as the Great Escape Family Fun Center. The parcel is zoned General Commercial (GC) and has approximately 100 parking spaces on site. Surrounding uses include strip commercial and stand-alone commercial uses, including an automobile dealership to the east. Single family neighborhoods are found to the north of commercial uses on Grand River Avenue and between Chilson and commercial uses on the south side of Grand River Avenue.

Future Land Use.

In the previous Master Plan, this site was designated for general commercial uses, which include businesses that serve the requirements of the community at large including Genoa Township, Howell, Brighton, and pass-by traffic along Grand River. The current Master Plan designates this area as mixed use and intends to provide flexibility for reuse of existing commercial structures and sites along with a mix of residential and commercial uses.

Redevelopment Concept

It is envisioned that future redevelopment will seek to reuse the existing structure and parking area. Residential uses are not anticipated, but instead commercial activities that can provide needed goods and services are envisioned. This site could present an opportunity for startup uses, such as through a food truck lot or pop-up retail spaces that have the potential to move into other spaces along the corridor.



Building Form

It is expected that the existing structure on the site will remain, at least in the near term.

Transportation

Improvements to promote walkability, such as connections to the shared use path along Grand River and improved pedestrian connections between adjacent uses, are expected.

Sustainability

The site could be improved by removing some of the asphalt parking area and adding more trees and enlarging landscape areas. Any new development on this site should be based on a framework of sustainable building and site design practices that offers a model for development and redevelopment elsewhere in the Township. The use of low-impact design, pervious paving materials, and native landscape materials should be prioritized.

Development of the District

As noted previously, a new mixed use district should be created to promote the flexibility and mixing of uses intended. In this case, allowing for temporary pop-up uses, food trucks and other business incubation models, should be included.

Pop Up, Temporary and Mobile Uses

“The reinvention of retail is still in its early phases, but what is happening with the pop-up trend is a near-perfect microcosm of where retail is going in the Age of Experience.”

- 2019 report by real estate consulting firm Cushman Wakefield

Recent economic and cultural trends show an explosion in the popularity of food trucks, mobile vendors, pop-up shops and other short-term commercial uses over the past several years. These uses may take up space in a vacant storefront, outdoor space or mobile unit. Holiday and seasonal shopping are frequently drivers of temporary or short-term retailing but increasingly, retailers and restaurateurs are using temporary spaces and mobile units to try out new ideas and business models. These may include new or even existing businesses trying experiential retailing, where the experience of shopping and dining are as important as the food, beverage and goods being sold.

Retail marketplaces—a concentrated area of multiple temporary vendors – can really generate interest in communities. One highly successful example is the Showfields in Manhattan (its flagship location – other Showfields locations include LA and Miami); this 15,000 square foot space where pop-up partners are curated and pay a monthly fee (rather than rent) to test out their businesses. Other examples include individual seasonal pop-up shops like those found in Detroit, Walloon Lake Village and Hyannis, MA.

Beyond traditional retail and restaurant uses, media companies are getting in on the action and experimenting with media/entertainment pop-ups. Netflix and other media companies are creating interactive, immersive events around popular TV shows, films and music that combine food, beverage and goods with pop culture sensations.

While the recent health pandemic accelerated trends in retailing that have been building in recent years, the pandemic itself hit the restaurant industry hard. Businesses and workers alike are trying to reinvent themselves and looking for new opportunities.



Walloon Lake



Town center food truck event

Benefits of Temporary Retailing

Temporary retailing may offer low-cost way to wade into the pool of business ownership or grow existing businesses.

Temporary retailing:

- Provides an opportunity to increase jobs and businesses without committing to buying or leasing space.
- Increases activity in struggling business districts by creating a dynamic environment where people gather around the availability of new and fresh food and other goods.
- Spreads the word about new activity through the use of social media by temporary vendors.
- Signals to other potential businesses that the community is adapting to the evolving economy and supporting entrepreneurship; communities that anticipate the demand from businesses and consumers may also find that this flexibility signals receptivity to new business models.
- They are a way for restaurateurs to test the local market for future bricks-and-mortar facilities. Mobile food trucks offer opportunities to interact with a potential market, to test recipes, pricing, and see if the restaurant is a fit with the community.
- Locating within or outside of existing businesses allow emerging businesses to benefit from greater exposure and foot traffic while existing retailers get the upside of increased foot traffic from curious shoppers interested in new offerings.



Showfields manhattan untapped, Newyork



Campus Martius Park, Detroit



Container Village 342 MLK Drive Bergen Lafayette Jersey City NJ. Source:Jersey City



Food truck event, Royal Oak
JUNE 14, 2022 DRAFT

Arts and culture

The earliest human experiences include expressions of art and the creation of cultures that define a group of people. There is no one definition of art; expressions of art include the visual, such as painting, drawing, photography or sculpture, as well as the performed, such as music, theater, dance and film. Art includes the spectrum from the written word and storytelling to animation and textiles. It includes industrial design, architecture and graphic design industries. The definition of “culture” is “all that is fabricated, endowed, designed, articulated, conceived or directed by human beings, as opposed to what is given in nature. Culture includes both material elements (buildings, artifacts, etc.) and immaterial ones (ideology, value systems, languages).”

According to the American Planning Association (APA), planners in the past have used art and culture as a “community revitalization tool,” but today, there is recognition that arts and cultural opportunities have tremendous potential to contribute to broader social, economic, and environmental aspects of community life. The APA states that arts and culture provide a medium to:

- Preserve, celebrate, challenge, and invent community identity;
- Engage participation in civic life;
- Inform, educate, and learn from diverse audiences; and
- Communicate across demographic and socioeconomic lines.

Arts & cultural activities – vast and innumerable – support individual health and wellbeing, promote community identity through placemaking and catalyze economic development.

The City of Fort Wayne’s Art Master Plan, Art for All, notes that “public art provides the intersection between our past, present, and future, and also has the power to transform a city because neighborhoods gain social, economic, and cultural value through public art.” The plan identifies the value art brings to a community:

Economic Value: Enhancing the identity and character of (the community) through public art directly supports cultural tourism and economic development strategies, which can attract and retain residents.

Social Value: When people see themselves reflected in their civic spaces, they have a sense of attachment that allows them to feel ownership and respect.

Cultural Value: Public art has the power to create uniqueness through the reflection of the local history and culture, which gives communities a sense of place and identity. Public art provides a visual mechanism for understanding other cultures and perspectives, creating social cohesion and encouraging civic engagement. Through the reinforcement of culture, public art acts as a catalyst for unity and social engagement.

Health and Wellbeing

Over the past several years, studies throughout the world have shown the value of arts and culture on individual and community health. In a 2018 report, the United States Department of Art and Culture (USDAC), a non-governmental grassroots action organization, cites several of these studies that include wide-ranging data to support the power of art on health and wellness.

The report concludes, “we understand human connection, meaning-making, creativity, and purpose as key contributions to individual and collective well-being and therefore as powerful modes of prevention.” The report concludes with the following findings:

- The arts can help keep us well, aid our recovery and support longer lives better lived.
- The arts can help meet major challenges facing health and social care: aging, long-term conditions, loneliness and mental health.
- The arts can help save money in the health service and social care.

Economic impact of arts and culture

The nonprofit organization Americans for the Art provides research data on the impact of arts and culture in communities. Their 2018 report on the economic impact of the arts (supported by the US Bureau of Economic Analysis) found that nonprofit arts and culture industries generated \$166.3 billion in total economic activity and supported 4.6 million jobs in 2015. The report notes that findings show that the arts are an “industry that supports jobs, generates government revenue and is a cornerstone of tourism.” The economic impacts are substantial in Michigan. In 2017, the arts and culture industries added 2.8% or \$13.9 billion to the state’s economy and employed 121,330 workers (about 3% of Michigan’s employment). These workers earned wages and benefits totaling over \$7.6 billion.

Strategies for Communities

To support community health and wellness, placemaking efforts and the local economy, communities should look for ways to support local arts and cultural activities. Some strategies may include:

- **Understand the community’s arts and cultural assets:** identify arts-related organizations and for-profit businesses as well as cultural organizations.
- **Promote community arts and cultural assets:** Leverage assets to attract and retain residents and businesses.
- **Support arts-related businesses:** Tap into the skill sets and synergies of local arts-related businesses; facilitate discussions with businesses to identify opportunities for support.
- **Information Hub:** Encourage the development of an umbrella organization to serve as the “hub” of information on activities and events, as well as learning and volunteer opportunities.
- **Promote interaction in public space:** design, manage and program public space with people in mind. Include citizen participation in these elements to ensure buy-in and ongoing support.
- **Encourage civic celebrations:** Partner with community organizations to host annual or seasonal events such as festivals or farmers markets; tap into the social, ethnic, and economic diversity found in the community.
- **Encourage youth in the community:** Provide opportunities for young people to create and participate in arts and cultural events and activities. Keep in mind that engaging the youth of the community also often engages adults.
- **Resources:** Provide human and financial resources to support local arts and culture organizations.
- **Public art:** Support temporary and permanent public art projects; explore creating a public art fund tied to new development.
- **Incubator Spaces:** Create incubator space for arts-related organizations and for-profit businesses as well as cultural organizations.

Community Character

Community character guides the way we regulate the development and redevelopment of land. For example, rules on building placement, like setbacks, have an impact on the spaces between buildings whether those spaces are private or public open space. In addition, community character can guide appearance and landscape standards and these can vary throughout the Township.

Why is Civic Identity important?

Creating and nurturing civic identity is critical for effective and efficient local governance. A civic identity can instill pride in residents that encourages them to vote in local elections as well as participate as Township board/ commission members. A solid, recognizable civic identity works with community character to support economic development both for business attraction and retention. It can also support local institutions who may rely on people from outside the community to understand where they operate.

Gateways

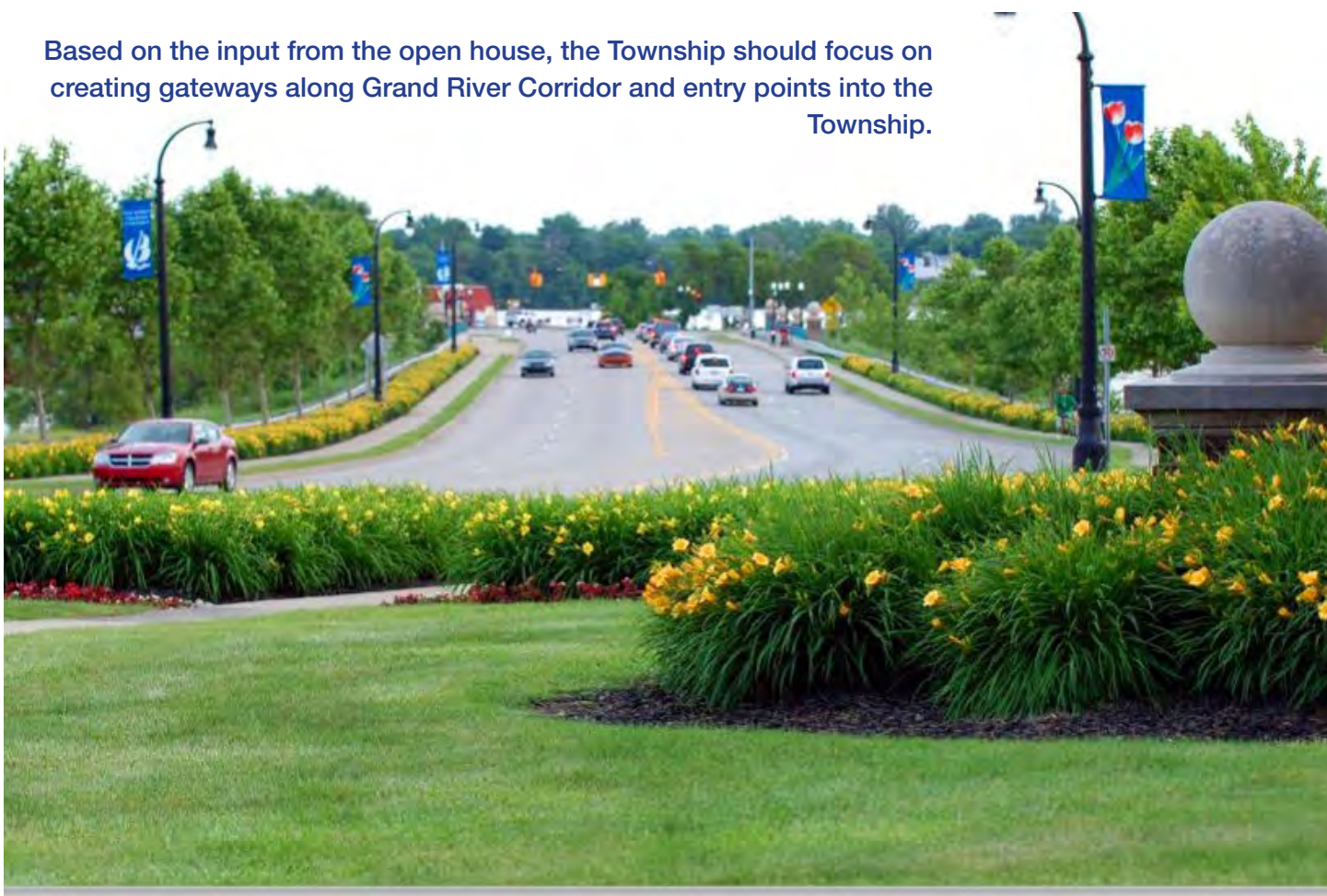
What are Gateways?

- Announce a point of arrival
- They can be located on a public or private property (or combination)
- They could be for people arriving by vehicle or on foot/ bicycle

Why are Gateways important?

- Reinforce community identity
- Creates anticipation for what is ahead
- Provide a sense of place Why is Community Character important?

Based on the input from the open house, the Township should focus on creating gateways along Grand River Corridor and entry points into the Township.



Placemaking

Placemaking means intentionally creating quality places that people seek out to live, work and play. It is a process of creating and nurturing quality places that have a strong sense of place. As it becomes increasingly easier to live and work anywhere, people will choose quality places that are:

- Safe
- Connected
- Welcoming
- Conducive to authentic experiences
- Accessible; people can easily circulate within and to and from these locations
- Comfortable; they address cleanliness, character, and charm
- Sociable; they have a physical fabric that encourages people to connect with one another
- Able to promote and facilitate civic engagement.

Because authenticity is a critical component of placemaking, arts and culture unique to a community are key ingredients in creating quality places. The Kresge Foundation is a strong advocate for placemaking in communities and focuses on the role that art and culture play. They establish the following guiding premises :

- Creativity, aesthetic expression and the impulse to create meaning are evidence of our humanity and serve as community assets from which to build.
- Participation in arts and culture takes many forms and occurs in a wide range of venues—parks, community centers, churches and public spaces. People attend art events and buy art. But they also make, teach, learn and support arts and culture in myriad ways, from the amateur to professional realms.
- Our societal tendency is to focus on art products, but it is also imperative to recognize and appreciate the creative process. Process can be as important as, or in some cases, more important than art product.
- Artists have many kinds of relationships with communities, often helping people find their voice and expression or lending a different perspective when framing or devising solutions to community issues.
- Arts-and-culture activity is intrinsically important and contributes to a wide range of community dynamics, conditions and issues.





Complete Streets

Complete Streets

Complete Streets is a term used to describe a transportation network that includes facilities for vehicles, pedestrians, cyclists, and other legal users of all ages and abilities. In 2010, Michigan passed Complete Streets legislation to encourage and justify the development of Complete Streets in communities. At that time, Michigan's Planning Enabling Act was also amended to require comprehensive plans to address Complete Streets.

Over the past several years, Genoa Township has been working on completing its sidewalk/shared use path network. The Township recently completed the network on Grand River Avenue, allowing for pedestrian and bicycle travel along this important corridor. The Livingston County Planning Department has also prepared a greenway manual for the Livingston County Greenways Initiative. The manual outlines goals, and objectives of greenways and standards for greenway development within the county. This chapter provides a summary of relevant information the Township can refer to plan for the overall system of streets and roads in a community that provides for the movement of people and goods from places both inside and outside the community.

This chapter summarizes general recommendations and emphasizes the importance of communities adopting Complete Streets Policy. The 2013 Township Master Plan includes recommendations about motorized and non-motorized improvements within the Township. The Township should consider evaluating those recommendations and updating them as required. The Township should consider other planning and outreach efforts to prepare a comprehensive complete streets policy for the Township.

Communities that adopt Complete Streets policies recognize that

- Complete Streets provide transportation choices, allowing people to move about their communities safely and easily.
- Complete Streets policies acknowledge the problems with current transportation facilities.
- Implementing Complete Streets strategies will make communities better places to live and work.

Relevant Plan References

- Crosstown Trail- Howell Area Non-motorized Trail Study, 2003
- Southeast Livingston Greenways, 2000
- Grand River Avenue Access Management Study
- Bicycle and Pedestrian Travel Plan for Southeast Michigan: A Plan for SEMCOG and MDOT's Southeast Michigan Regions, 2014

Refer to page 1.5 for more details about the plan and related recommendations. The implementation strategies chapter summarizes corresponding complete street strategies.



FIG 3.9. COMPOSITE CONSERVATIVELY ESTIMATED OPPORTUNITIES

The graphic below illustrates elements of complete streets - but not every street needs to contain every element. In Genoa Township, many of these elements are not appropriate, but provided here for future reference and education. Throughout a community's transportation network, there may be opportunities to provide facilities for pedestrians, bicyclists and users of transit (where applicable).

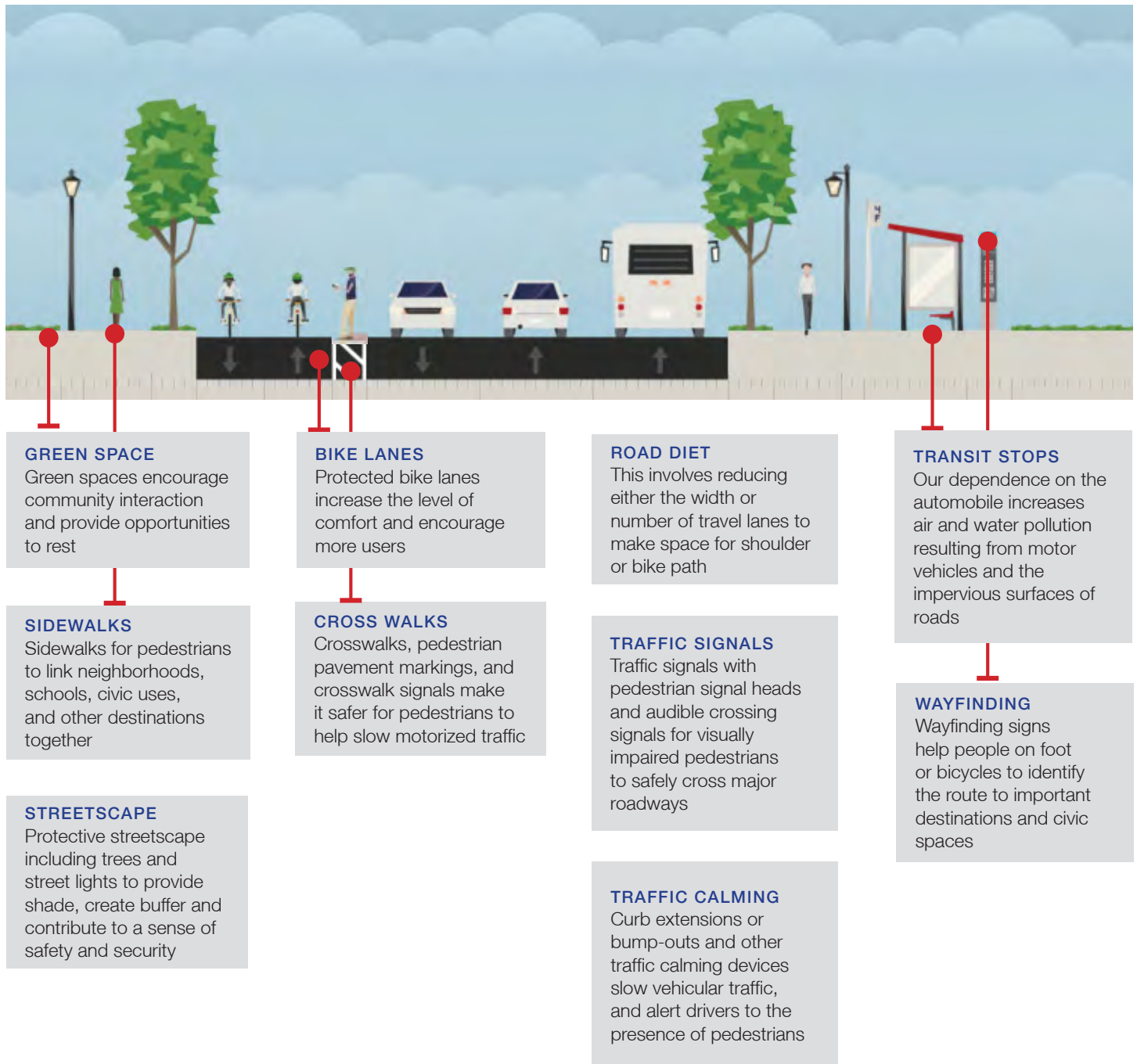


Image Source: Street Mix; Exhibit prepared by: Giffels Webster

FIG. 3.10. BENEFITS OF COMPLETE STREETS

Safety



1. Reduce pedestrian accidents by increasing the safety factor.
2. Improve perceptions of the safety of non-motorized travel, which strongly influences decisions about alternative modes of travel for many.
3. Reduce either the width or number of travel lanes to make space for shoulder or bike paths will improve safety (road diet).



On an average, a pedestrian was killed in the US every **88 minutes** in traffic crashes in 2017

Health



1. Promote walking or biking to school to lower child obesity rates.
2. Encourage activities to counteract a sedentary lifestyles, which have been shown to be associated with a host of long-term health problems.
3. Add sidewalks, bike paths and access to transit to increase levels of physical activity.



Between 1989 and 2018, **child obesity rates** rose dramatically, while the percentage of walking or biking to school dropped

Access



1. Address equity concerns by designing facilities that are safe, accessible, and welcoming for all users, particularly for the elderly, the disabled, and children.



54% of older American living in inhospitable neighborhoods say they would walk and ride more often if things improved



Environment



1. Reduce dependence on the automobile to lower air and water pollution resulting from motor vehicles and the impervious surfaces of roads.
2. Promote a shift away from automobile travel. Studies have shown that 5 to 10 percent of urban automobile trips can reasonably be shifted to non-motorized transport.

Carbon-dioxide emissions can be reduced by **20 pounds per day** or more than 4,800 pounds in a year per each commuter by using transit instead of driving



Nearly **40 percent** of merchants reported increase in sales, and **60 percent** more area residents shopping locally due to reduced travel time and convenience

Economy



1. Design residential and local business districts with traffic calming measures to provide safe pedestrian access and increase consumer activity.
2. Implement Complete Streets policies as placemaking strategies for economic development and community revitalization.

Prepared by *Giffels Webster*, data compiled from multiple sources.

Design Considerations

The usage rate of any non-motorized facility by diverse groups of users depends on the level of comfort the path provides. Level of comfort typically depends on various stress factors such as vehicular traffic speed, volume and the time of the day. Safely designed pedestrian/bicycle lanes lead to more users and less accidents.

Level of Traffic Stress

The Mineta Transportation Institute developed a rating system to rate the “stress levels” users experience. The ‘Level of Traffic Stress’ (LTS) ratings range from 1 (lowest stress) to 4 (highest stress and discomfort) and are based on factors such as the speed and volume of vehicle traffic, the number of travel lanes, the size and complexity of intersections, and the types of bicycle facilities provided.

Type of Ridership

A study completed by Roger Geller for the Portland Office of Transportation identified Four type(s) of users which correlates with the LTS ratings. The type of riders are categorized by their level of comfort riding on different types of facilities.

All Ages and Abilities

National Association of City Transportation Officials (NACTO) developed an ‘All Ages & Abilities’ criteria for selecting and implementing bike facilities. All Ages and Abilities facilities are defined by three primary factors: safety, comfortability and equitability. This guide helps communities design facilities with appropriate traffic calming measures based on contextual factors such as vehicular speeds and volumes, user type and level of comfort to reduce accidents and increase ridership. Another good resource for determining the right type of facility for a particular route is the ‘Bikeway Selection Guide’ created by US Department of Transportation Federal Highway Administration.

FIG. 3.11. ALL AGES AND ABILITIES

TYPE OF USERS		BARRIERS TO CONSIDER
	Children	Smaller and less visible from driver's seat
	Seniors	Lower visual acuity and slower riding speeds
	Women	Concerns about personal safety and traffic stress. Prefer buffers or barriers from vehicular traffic lanes.
	People Riding Bike Share	Bike to transit or make one-way trips. Rely on comfortable and easily understandable bike structure
	People of Color	Fear of exposure to theft, assault or being a target for enforcement.
	Low-Income Riders	Rely extensively on bicycles to ride to work. Access to continuous and safe facilities.
	People with Disabilities	Use adaptive bicycles that require wider envelope and operate at lower speeds.
	People Moving Goods or Cargo	Cannot be accommodated by facilities designed to minimal standards.
	Confident Cyclists	Constitute a smaller percentage of total users, most often male. In the U.S., 76% of bike trips are made by men and 87% of competitive cyclists are male.

Source Text: National Association of City Transportation Officials (NACTO)

FIG. 3.12. LEVEL OF TRAFFIC STRESS AND TYPE OF RIDERSHIP

LTS-1

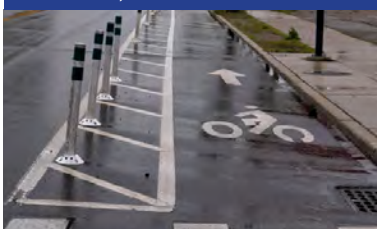
Interested, but Cautious Riders

**SHARED USE PATHS**

1. Shared use paths are used by pedestrians as well as bicycle users
2. 8 feet min. width with 5-10 feet planted buffer
3. Ideal traffic speeds less than 25 miles per hour
4. Wider Right-of-way widths
5. Pavement surfaces should be based on anticipated usage volumes
6. **Comfortable for all ages and abilities**

**LTS-2**

Interested, but Concerned Riders

**BUFFERED BIKE LANES**

1. Bike lanes separated by buffers defined by pavement markings and parallel parking
2. 8 feet min. two-ways or 5 feet min. one-way with 5 feet painted buffer
3. Ideal traffic speeds from 20-25 miles per hour
4. Limited Right-of-way widths
5. Add vertical delineation such as candlestick bollards for increased level of perceived protection
6. **Comfortable for most adults**

**LTS-3**

Enthusied and Confident Riders

**BIKE LANES**

1. Dedicated bike lanes that are adjacent to traffic lanes
2. 8 feet min. two-ways or 5 feet min. one-way with 5 feet
3. Ideal traffic speeds more than 25 miles per hour
4. Dedicated bike lanes that are adjacent to traffic lanes
5. Limited Right-of-way widths
6. Reduce curbside and intersection conflicts through access management
7. **Comfortable for confident bicyclists, who prefer not to share with the vehicles**

**LTS-4**

Strong and Fearless Riders

**BIKE ROUTES**

1. Identifying a specific route as a 'Bike Route' is the simple alternative when immediate infrastructure improvements to roadway network are not feasible
2. Wayfinding signage such as 'share the road' or directional signage can be installed to guide the users to destinations or other connections
3. Traffic calming measures are required to manage speeds
4. **Uncomfortable for most users**



Prepared by Giffels Webster

Data Source: Mineta Transportation Institute & Roger Geller for the Portland Office of Transportation

Ten Principles of Complete Streets Policy

VISION	Vision and intent	Includes an equitable vision for how and why the community wants to complete its streets. Specifies need to create complete, connected, network and specifies at least four modes, two of which must be biking or walking.
DESIGN	Diverse users	Benefits all users equitably, particularly vulnerable users and the most under-invested and underserved communities.
	Design	Directs the use of the latest and best design criteria and guidelines and sets a time frame for their implementation.
	Land Use and context sensitivity	Considers the surrounding community's current and expected Land Use and transportation needs.
IMPLEMENTATION	Performance measures	Establishes performance standards that are specific, equitable, and available to the public.
	Commitment in all projects and phases	Applies to new, retro-fit/reconstruction, maintenance, and ongoing projects.
	Clear, accountable expectations	Makes any exceptions specific and sets a clear procedure that requires high-level approval and public notice prior to exceptions being granted.
	Jurisdiction	Requires inter agency coordination between government departments and partner agencies on Complete Streets.
	Project selection criteria	Provides specific criteria to encourage funding prioritization for Complete Streets implementation.
	Implementation steps	Includes specific next steps for implementation of the policy.

Data Source: National Complete Streets Coalition (NCSC)

Complete Streets Objectives for Genoa Township

The basic objectives of a “complete street” system in Genoa Township from 2013 Master Plan for Land Use are listed below. These objectives are consistent with other recommendations summarized in the preceding pages.

Provide a Variety of Travel Routes.

Those walking or biking are more likely to do so when they feel safe and comfortable. Therefore, a variety of routes should be provided so non-motorized facilities are planned along roads with travel conditions that would naturally attract such activity. This involves providing connections from neighborhoods to schools, the Township Hall campus, and recreation in and near the Township. See page 3.41 for more details.

Provide for Safe Travel Along the Street.

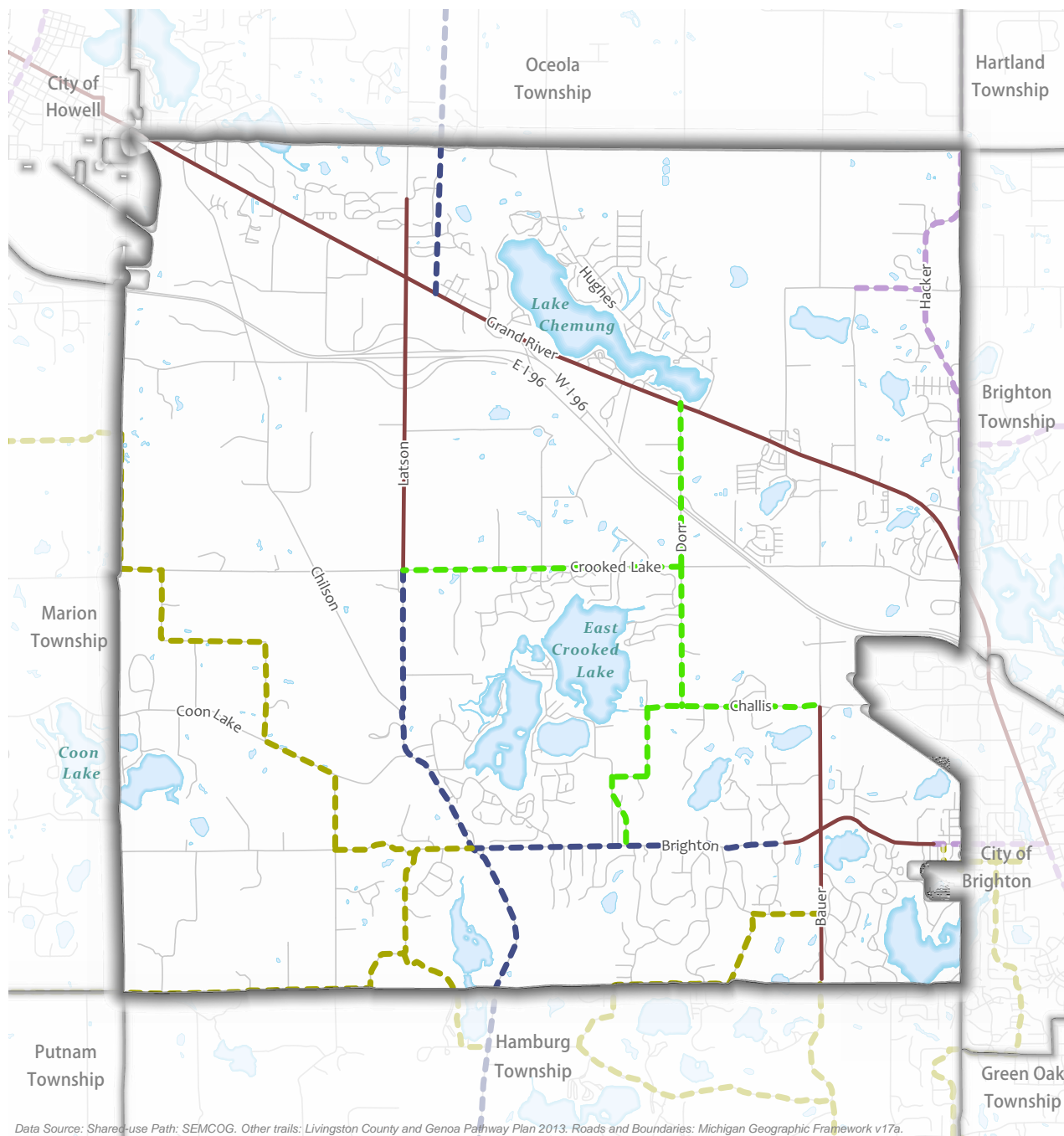
A variety of options may be considered to facilitate non-motorized and/or transit travel, in addition to moving vehicular traffic. Depending on the context, bike lanes, cycle tracks, sidewalks and pathways can all assist in moving pedestrian and bicycle traffic. See page 3.38 for more details.

Provide for Safe Travel Across the Street.

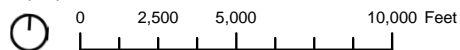
Where travel along the road is often considered in non-motorized planning, it is often the travel across the street that can deter non-motorized activity, such as busy arterials like Grand River. The goal is to provide some convenient places to cross where the pedestrian is very obvious to the driver. See page 3.39 for more details.

Different Types for Different Folks.

While experienced bicyclists prefer riding in the travel lane or along its right edge, less experienced riders prefer a bit more protection. Since one goal is to encourage people to bicycle more frequently, a system that meets the needs of those potential users is important. Therefore, bike lanes, buffered bike lanes, and separated pathways should be part of an overall bikeway system. See page 3.40 for more details.



Data Source: Shared-use Path: SEMCOG. Other trails: Livingston County and Genoa Pathway Plan 2013. Roads and Boundaries: Michigan Geographic Framework v17a.
Map Exported: October 20, 2021. ©2020 Giffels Webster.



- Proposed Genoa Path
- Proposed County Priority Routes
- Proposed County Near Term Network
- Proposed County Long Term Network
- Existing Shared-Use Path

Sustainability & Resiliency

Sustainability & Resiliency

It is becoming critical to include concepts of resiliency and sustainability into Land Use plans. Though they are related, resiliency and sustainability are not the same.



Sustainability is the well-established concept that focuses on decreasing or eliminating the detrimental future impacts of our current activity.



Resiliency recognizes that our built environment will be subject to stresses and is the practice of designing that environment in a way that can endure those stresses. Some threats are ongoing, persistent stresses, while others are sudden shocks or single events that disrupt the day-to-day functioning of the community.

As we plan for the future, many of the challenges we will face are related either directly or indirectly to our place in larger systems, both natural and man-made. We often have little direct local control over these systems, but adapting to change and discovering our role in contributing to the health of these systems is nonetheless essential to planning for a community that can survive and thrive even in the face of the most severe challenges. Resilient communities are not only preparing for weather and climate-related shocks, but are also preparing for economic and health shocks as well. In 2020, we saw the impacts of a global pandemic on local community health, education, recreation, commerce, technology and social connectivity. These impacts touched everyone's lives in big and small ways and may have lasting impacts in our communities.

Effects of Climate Change

A changing climate has far-reaching implications for Michigan's agricultural and tourism economies, waterfront development, and communities with older stormwater management infrastructure. Locally, within the last decade, Oakland County has experienced multiple heavy rain events that have led to property damage and decreased mobility and must anticipate that more flooding will occur in the future, damaging property, impairing access to parts of the Township, and creating financial distress for local residents and businesses.

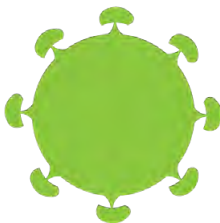
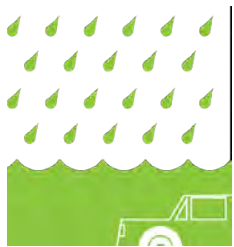
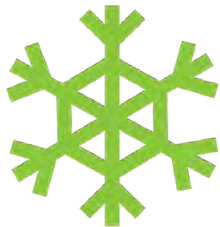
As the frequency and intensity of severe weather events continues to increase, communities will experience economic disruption. For instance, while the frost-free season has nominally increased, farmers in many of Michigan's agricultural communities have not benefited in recent years due to abnormally late frosts (such as those in mid-May, 2020) or heavy rain events, which have damaged early crops or delayed planting of late crops. Rising temperatures and more very hot days may affect the timing of summer festivals and tourism.

Communities must be prepared to anticipate the local effects of regional climate trends. According to the United States Environmental Protection Agency, climate change is already impacting many sectors of our communities. At a minimum, increases in air temperature and precipitation, combined with other factors, have caused impacts in the Great Lakes region including:

- Increased risk of heat-stress to equipment, infrastructure, and people, especially those who work outdoors or are otherwise vulnerable.
- Increased flooding and coastal erosion.
- Reduction in water quality due to increased occurrences of toxic algae blooms.
- Changes to the usability of water infrastructure like docks and piers.
- Economic impact to industries like forestry, fishing, crop production, tourism, manufacturing, energy production, and recreation.
- Expanded commercial navigation season as ice coverage continues to decline on the Great Lakes



This Master Plan recognizes the importance of additional planning efforts needed to ensure the Township is resilient and sustainable. Future planning should include a public outreach process in two basic parts: education and input. Education includes making community members aware of potential threats and the process of planning for them, with an emphasis on outreach to the most vulnerable members of the community. The input process should offer the opportunity for residents and other stakeholders such as municipal staff and business owners to engage in detailed, focused conversations regarding resiliency planning issues. It is important for the community to engage in vigorous outreach through multiple channels to get people involved.



Extreme heat

Average temperatures in the Great Lakes region rose 2.3 degrees Fahrenheit from 1951 through 2017. Extreme heat is dangerous for vulnerable populations and can also tax electrical infrastructure, leading to power outages, which in turn can increase the risk for the people most prone to succumbing to heat. Designating specific locations with backup power sources (such as municipal halls, libraries, and schools) as cooling stations can provide vulnerable residents with an essential escape from the heat. There may be a need to provide transportation to cooling stations for those with limited mobility options.

Severe winter storms

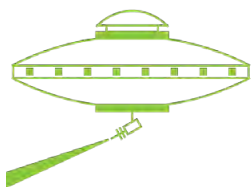
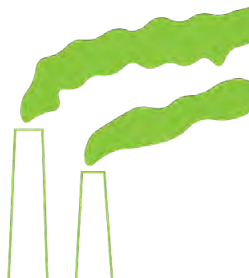
As temperatures rise, winter precipitation levels are anticipated to rise as well, and mixed precipitation events with more heavy ice may become more common. Severe winter storms can result in power outages, impeded mobility, damage to structures and trees, and lost economic productivity. Municipal costs for snow removal should be included in budget planning. While storms are the primary focus of future concern, communities also benefit from planning for extreme cold—locations designated as cooling stations in the summer can become warming stations in the winter.

Heavy rain and flooding

Heavy rain events are already more common in Michigan than they were in the mid-to-late 20th Century, having increased by 35 percent from 1951 to 2017, as total annual precipitation increased by 14 percent. They are anticipated to become even more common in the future.

Public health emergencies

The 2020 COVID-19 pandemic brought with it unprecedented economic disruption, forced short-term changes in social habits, destroyed numerous small businesses, and led to a very large increase in unemployment in a very short time period. Planning for public health emergencies needs to consider the many dimensions of the social fabric that are heavily impacted, including the availability of medical services, government's ability to continue functioning under quarantines or stay-at-home orders, and the locations and numbers of vulnerable populations. Local police, fire, and ambulance services may be particularly taxed in a future public health emergency.



Damage to natural systems

Human activity is rarely in balance with the natural systems it occurs within. While resource extraction and pollution offer two very obvious examples of human activity, nearly all modern human development activity has some impact on natural systems, including loss of habitat, interruption of habitat, and increased emissions due to greater travel distances as development moves outward into wild places. A combination of rising temperatures and agricultural runoff that changes the nutrient balance in major water bodies has led to much higher frequency of toxic cyanobacteria and algae blooms, particularly in Lake Erie. These blooms can impair drinking water quality and limit recreational opportunities, including fishing and watersports.

Unanticipated events

No community can plan for every possible future event or scenario. This is why developing resiliency, improving sustainability, understanding vulnerabilities, and identifying emergency resources is so important.

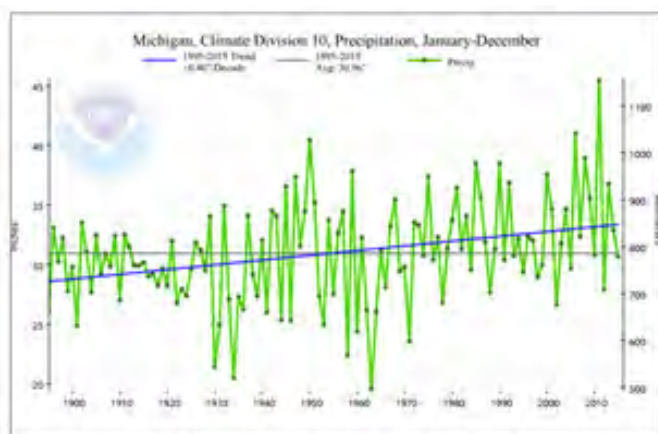
Drought

We most frequently think of drought as a prolonged period without precipitation. While this kind of drought is certainly possible in the future in Michigan, the more likely effects of the changes the state is experiencing will be changes in seasonal distribution of storms with precipitation. Winter rainfall will become more common, snowpack overall may decrease, and stream levels will peak earlier in the year, affecting water availability and the timing of groundwater recharge. Drought is exacerbated by higher temperatures, which lead to increased evaporation rates; even with higher average rainfall, land may become drier, and as rain becomes less frequent in the hottest summer months, mid-summer drought could become a regular challenge. Dry conditions bring with them the possibility of wildfires, which are not uncommon in rural Michigan but could grow in scale and intensity in coming years. It is important to understand the community's water sources and how extended periods of drought might affect water availability.

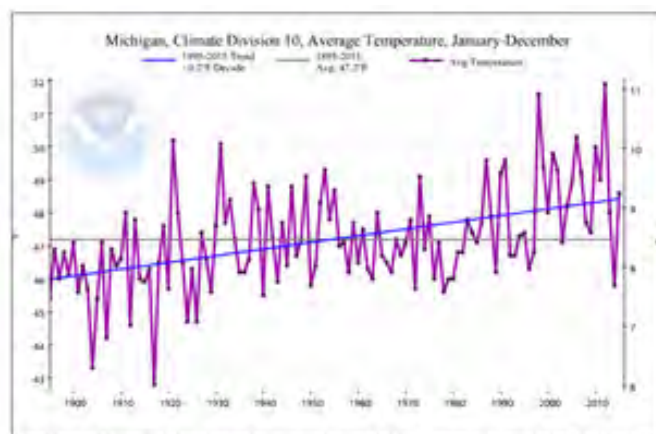
Food systems

As the climate changes and weather patterns shift accordingly, planting and harvesting conditions become less predictable, and the potential for crop losses increases. In 2019, unusually heavy rains across much of Michigan made planting during the typical time difficult for many farmers. While the number of frost-free days has increased by an average of 16 days across the Great Lakes region from 1951 to 2017, the timing of those extra days has not uniformly added to the growing season. In recent years, unexpected late freezes after earlier-than-usual warm weather lead to the loss of large portions of fruit crops such as apples and cherries.

Regional climate trends indicate that southeast lower Michigan is poised to see stronger and more frequent storms, in addition to higher temperatures. The figure below shows how these two measures have been trending steadily over the last 100 years. With increasing precipitation, more frequent extreme heat days and an overall rise in average temperature, communities should be planning for what this mean locally and how their most venerable populations are situated to survive.



Southeast Lower Michigan Annual Precipitation (In Inches) from 1895 to 2016. Source: NOAA Climate Divisions.



Southwest Lower Michigan Average Annual Air Temperatures from 1895 to 2016. Source: NOAA Climate Divisions.

Addressing Resiliency: Identifying Vulnerable Populations

Resilient communities anticipate likely shocks, understand trends in stressors, and prepare for potential worst-case scenarios. Understanding where a community is physically most vulnerable to specific events and understanding which members of the community are likely to be most vulnerable in each case is key to effective planning. Vulnerability assessments have been used across Michigan to identify vulnerabilities within a community and to develop tools communities can use to foster resiliency in their policy decisions. A vulnerability assessment looks at exposure to risk and sensitivity to risk.

Exposure demonstrates the land, property, and neighborhoods that are most likely to be impacted by flooding, heat, or other severe weather. Low lying land, land near bodies of water, areas with large swaths of pavement, neighborhoods with few trees, and sections with older homes all suffer from high levels of exposure.

Evaluating exposure to risk asks: where is the environmental risk the greatest?

Sensitivity demonstrates the members of the population that are most likely to be impacted by severe weather. The most sensitive populations are the elderly, young children, people with medical conditions, those living in poverty (especially the homeless) and people who work outdoors. People who live alone, regardless of their economic status, are also at higher risk

Evaluating sensitivity to risk asks: who in my community is most likely to experience the adverse effects from that risk?

Sustainable Development Strategies

Mitigating Risks

Next to placing land into various zoning districts, site plan review is the most powerful planning and natural resource protection tool. Easily enforced, site plan review is a way for communities to ensure what is approved on a site plan is what will be built. When large projects are proposed or when small projects are proposed in or adjacent to sensitive natural resources, some communities require applicants to submit an environmental assessment, which details the impact of the proposed development on natural resources. Communities that have plans and zoning regulations based on a solid environmental inventory are able to set the threshold for future environmental assessments at a defensible level. Without such a basis, an environmental assessment may be considered arbitrary, as there is little context for the requirement. An environmental assessment can be a valuable source of information, and in some cases an important tool for ensuring that new development is designed in such a way that unavoidable environmental impacts are properly mitigated. Environmental assessment can also be viewed as an affirmative tool for helping a local government meet its responsibility for preventing pollution, impairment or destruction of the environment.

Stormwater Management

The Township's existing water features play an important role in managing storm water. Several creeks and streams, which connect the Townships natural water system, meander through the Township, connecting lakes and wetlands with each other, and then conveying storm water run-off.

Impervious Surfaces

Because development replaces pervious ground with impervious pavement and buildings, water runs off the surface rather than permeating naturally through the ground. As stormwater drains across pavement, it picks up pollutants such as automobile fluids, fertilizers, and sediment and conveys them into a storm drain. If a storm drain is directly connected to a creek, the creek receives polluted water which, in turn, can degrade water quality and wildlife habitat. This, in turn, degrades streams and water quality unless managed in an ecologically-sound manner. Ordinance standards that limit impervious surface coverage, or regulate materials used to construct impervious surfaces, can address this at a site plan individual site level.

Portions of southeast Michigan receive their drinking water from surface water sources. Because stormwater heats up the longer it sits on hot, impervious surfaces, it can also impact aquatic organisms that depend on cool or cold-water habitats. Lastly, water volume is greater for surface stormwater; Therefore, it reaches the stream much faster. The increased volume and speed erode stream banks and impairs the stream's ability to support aquatic vegetation and wildlife.

Natural Shoreline Dynamics

Runoff is one of the primary concerns regarding the shoreline dynamics and water quality of inland lakes. Runoff can carry fertilizer and other undesirable substances into the water, some of which can cause an overgrowth of aquatic plants and alter the natural ecosystems in these lakes. It is crucial to protect natural ecosystems by managing development on the shoreline and in the watersheds of inland lakes. Communities can create best practices to protect inland lakes from erosion and runoff damage by encouraging the use of permeable pavement and growing native plants along the shoreline and in the watershed.

Zoning Plan

Zoning Plan

RELATIONSHIP BETWEEN MASTER PLAN AND ZONING ORDINANCE

Master Plan

Long range vision that guides community policy

Community Master Plans illustrate the vision for the future and contain guiding principles that help a community create land development policies and make Land Use decisions. In Michigan, the value of the Master Plan as an important community document is recognized, which is why the state of Michigan requires the Master Plan be reviewed every five years. The Township should check in on their progress regularly and ensure the vision and guiding principles are still relevant.

Zoning Ordinance

Legal framework that regulates development

A zoning ordinance regulates the use of land. Adopting regulations that support the goals of the Master Plan helps ensure that future development will be in line with the community's goals and vision. It is also helpful to develop an itemized implementation guide for a Master Plan. The Zoning Ordinance is one of the primary tools for implementing a Master Plan; there should be a clear connection between Master Plan goals and the Zoning Ordinance. Many of the Land Use recommendations, goals and objectives found in the Master Plan can be aided by amendments to the Township's Zoning Ordinance.

@Giffelswebster, Inc.



TABLE 4.1. ZONING PLAN

2022 Future Land Use Category	Zoning District	Notes
Housing		
Agricultural/Country Estate	Agricultural District (AG) Country Estate District (CE)	
Rural Residential	Rural Residential (RR)	
Low Density Residential	Low Density Residential (LDR) Lakeshore Resort Residential (LRR)	
Small Lot Single Family Residential	Suburban Residential (SR)	
Medium Density Residential	Urban Residential (UR) Medium Density Residential (MDR) Manufactured Housing Park (MHP)	
High Density Residential	High Density Residential (HDR)	
Commercial		
Neighborhood Commercial	Neighborhood Services District (NSD) General Commercial District (GCD)	
Interchange Commercial	Interchange Commercial (ICPUD) District	
Interchange Campus	Interchange Campus (CAPUD) District	
Mixed Use		
East Grand River District	Town Center Overlay District (TCOD)	New Category
West Grand River District	New Categories	New Category
Industrial		
Industrial	Industrial District (IND)	
Research and Development	Office Service District (OSD)	



Action Strategies

Action Strategies

The thoughtful preparation and adoption of any plan would be of diminished value without a program of implementation strategies. The implementation strategies of this chapter will assist the Township in putting the key recommendations of the Master Plan to work. The implementation program is based on the goals and objectives discussed earlier. A specific Zoning Plan outlines steps that can be taken toward implementation through amendments to the Zoning Ordinance.

The best plans are those that are implemented in a consistent, incremental, and logical manner. The implementation matrix that follows is designed to show how the goals of the Master Plan are fulfilled by action strategies. All boards, commissions, and authorities are encouraged to read through all of the strategies to understand how they all work together to create a better community to live, work, and play.



Goals

Goals are general guidelines that explain what the community wants to achieve. Goals are usually long-term and represent global visions such as “encourage economic development” Goals define the “what,” “why,” and “where,” but not the “how.” Identifying obstacles to overcome is also useful in defining goals.



Objectives

Objectives identify the milestones that mark progress in achieving goals and provide more of the “how” goals will be implemented. For example, with a goal of “encourage economic development,” an objective to “Develop strategies to maintain and enhance the Township’s industrial and commercial use.” is something that may be measured and tracked over time.



Action Items

Action Items are more specific and define the steps to accomplish objectives and attain the identified goals. The most effective action strategies will include who will tackle that task and when it should be accomplished. For the above example objective of developing strategies to enhance industrial and commercial uses, one action strategy might be “Coordinate land use decisions with community facility and utility planning.” This may be assigned as a staff item to be completed within one to three years.

Implementation Matrices

In order to illustrate the connection between goals, objectives and action strategies, each of the implementation matrices that follow align with the goals, which are noted at the top of each matrix. Within each matrix, the action items are broken into subcategories intended to assist with identification and prioritization. Not all goals contain action items within each subcategory and some goals are repeated as they can advance more than one goal. The matrix subcategories include:

TABLE 4.2. IMPLEMENTATION ACTION ITEMS

Action Strategy	Description
Zoning	These are items requiring zoning amendments and will generally be led by staff and the Planning Commission.
Advocacy	These will be items involving education of the community, including residents, business owners, property owners, developers and design professionals. They will be led by a combination of staff, boards and commissions. This may also involve Township staff and officials working with county and state officials to coordinate plans and funding, as appropriate.
Capital Improvement	These involve large capital investments, such as equipment, projects or studies, that require inclusion into the Township's Capital improvement plans in order to determine the most efficient time and method of completion and may involve multiple municipal departments.
Other	Other items may involve research, study and further evaluation by staff and/or other boards and commissions.

The tables that follow assign actions to the goals and objectives, leaving room to establish priority levels for short-term, mid-term, and long-term items as the next step following adoption of this plan. This chapter should be reviewed periodically and at least annually to assess progress and adequately budget for specific strategies. Each action should have a "lead," a board, commission, group, or individual who is responsible for project initiation and coordination.

TABLE 4.3. IMPLEMENTATION MATRIX CATEGORIES

Matrix Categories	Definitions
Action Strategy	The actions necessary to carry out goals and objectives
Lead Body	Identifies the primary party responsible for accomplishing the action strategy
Time frame	Identifies and prioritizes the time frame for the action strategy to be implemented.
Supporting Partners	Identifies other parties involved in the accomplishment of the action strategy
Abbreviations	PD - Planning Department PC - Planning Commission TB - Township Board NA - Not Applicable LCRC - Livingston County Road Commission MDOT - Michigan Department of Transportation

After adoption, the Planning Commission will assign time frames or priorities to the action items. These time frames are intended as guides and may be adjusted as resources allow or as other issues arise. Generally, short time frames are intended as three years or less; medium-to-long time frames are more than three years.



Goal 1 | HOUSING & NEIGHBORHOODS

Objectives

- Allow the pattern of homes on large rural lots to continue where it exists, particularly south of I-96.
- Focus new housing on concentrated areas near already-developed areas
- Ensure new development is of high quality and design.
- Ensure that housing is available near transportation corridors, goods and services.
- Encourage student housing associated with Cleary College.
- Encourage housing for older residents near medical facilities as well as goods and services.
- Encourage the ongoing maintenance and upkeep of housing
- Support older residents who wish to stay in their homes as long as possible.
- Allow existing lakefront homes to be improved and expanded without compromising the established character of the lake neighborhoods or water quality.
- Limit impact of short-term housing rentals



Goal 1 | HOUSING & NEIGHBORHOODS

Type of Action Strategy		Lead Body	Time Frame	Supporting Partners
Zoning Action Strategies				
1.1	Review zoning map to ensure it is consistent with existing and planned utility extensions; prioritize any areas that should be updated.	PC		PD, TB
1.2	Review the Zoning Map to ensure that a variety of housing types are allowed within walking distance of shopping, dining, entertainment, recreation, and employment that encourage younger as well as older residents to remain.	PC		PD, TB
1.3	Consider how the zoning ordinance may need to change to permit smaller single-family homes and expand opportunities for attached single-family homes	PC		PD, TB
1.4	Explore ordinance changes to permit small attached accessory dwelling units with single-family homes.	PC		PD, TB
1.5	Consider adopting flexible alternative zoning standards that allow development projects to meet specific Master Plan goals, such as reducing parking standards for multi-family housing near transit stops or multi-modal transportation facilities (including shared use pathways).	PC		PD, TB
1.6	Update the zoning ordinance to encourage housing near Cleary College and medical facilities that promote and support a healthy walkable environment.	PC		PD, TB
1.7	Enable residents to age in place by creating zoning standards that encourage the development of active adult housing in a variety of styles, including single-family homes and mixed-use development.	PC		PD, TB
1.8	Update lakefront zoning regulations as needed to ensure new homes and additions to existing homes fit the context (mass and height) of lakefront neighborhoods and water and sewer systems can accommodate additional development.	PC		PD, TB
1.9	Develop appearance standards for residential dwellings to maintain high-quality architecture throughout the Township	PC		PD, TB
1.10	Review zoning ordinance to review list of permitted, special Land Uses and consider whether there are uses that no longer are appropriate or uses that should be added. Consider if any uses could have specific conditions that may make review/approval clearer and more consistent.	PC		
Advocacy Action Strategies				
1.10	Complement active-adult developments with nearby entertainment and community recreation opportunities.	TB		PD
1.11	Support older residents who wish to age in place by identifying home repair program resources for residents and consider sourcing volunteer labor to assist homeowners who are unable to perform work themselves.	TB		PD
1.12	Work with local elected officials and state representatives to promote the Townships position “regarding short term rental regulation” at the state level and explore options for local regulation.	TB		PD
1.13	Work with local elected officials and state representatives to promote the Townships position at the state level and explore options for local regulation.	PD		PC, PD
1.14	Promote policies and programs to make housing more accessible to the elderly and mobility challenged individuals.	TB		
1.15	Pursue strategies to make Genoa Township an “Age-Friendly Community,” including supporting public transportation, attracting goods and services that support a variety of ages in the community, promoting community health strategies, encouraging social and civic engagement for people of all ages.	TB		PD
Capital Improvement Action Strategies				
1.16	Evaluate infrastructure, including broadband, water, sewer, roads and multi-use pathways, to ensure housing is connected and supported as appropriate.	TB		PD



Goal 2 | ECONOMIC DEVELOPMENT

Objectives

- Allow flexibility of uses in the Grand River corridor.
- Ensure uses that rely on the interstate highway for logistics/transportation have adequate access.
- Work with property owners to identify and locate compatible/complementary users in concentrated areas to promote a thriving economic ecosystem.
- Strengthen the reputation of Genoa Township in the region for business development and job creation.
- Ensure adequate housing for the local workforce to support economic development.
- Support local broadband and technology services that will allow residents to work from their homes

Type of Action Strategy		Lead Body	Time Frame	Supporting Partners
Zoning Action Strategies				
2.1	Assess the Zoning Ordinance and amend as needed to provide for small neighborhood uses, including retail, food establishments, and office spaces, adjacent to residential areas to encourage walkability and minimize traffic congestion	PC		PD, TB
2.2	Create mixed use overlay zoning district(s) in designated areas along Grand River to promote a mix of uses and ensure building and site design support the desired walkable, vibrant district hubs.	PC		PD, TB
2.3	Assess the Zoning Ordinance and amend as needed to reinforce appearance standards for new development	PC		PD, TB
Advocacy Action Strategies				
2.4	Develop a property inventory by working with property owners to provide information on available properties on the Township's website	PD		
2.5	Establish regular meeting dates with the Livingston County Road Commission to monitor and discuss the local road network and identify areas for desired improvement	PD		LCRC
2.6	Develop a business retention and recruitment program to support the ongoing health and sustainability of the local businesses district.	TB		PD
2.7	Develop annual survey to better understand the needs of the business community and ways in which the Township can provide support.	PD		
2.8	Prioritize development in the Grand River corridor over other areas of the Township.	TB		PD
2.9	Prioritize development at the S Latson interchange area before extending south into transition area.	TB		PD
Capital Improvement Action Strategies				
2.8	Evaluate infrastructure, including broadband, water, sewer, roads and multi-use pathways, to ensure housing is connected and supported as appropriate.			



Goal 3 | NATURAL FEATURES

Objectives

- Protect natural areas by limiting development to areas with existing infrastructure and strictly enforcing the natural features setback
- Create strategies to conserve water and energy and reduce waste
- Protect the Township's groundwater resources by increasing wellhead protection and undertaking measures to prevent groundwater pollution.
- Concentrate development so there is minimal conflict between the man-made and natural environment.
- Establish Land Uses that are compatible with designated open space
- Identify ongoing environmental stresses, such as invasive species, in the community and the potential for sudden events, such as flooding, and prepare plans to mitigate their impacts.
- Increase tree cover and reduce impervious surfaces in developed areas to better manage stormwater and mitigate impacts of climate change.
- Monitor septic capacity to ensure lake front properties are properly maintained and direct new development to areas that have sufficient facilities

Type of Action Strategy		Lead Body	Time Frame	Supporting Partners
Zoning Action Strategies				
3.1	Create a Zoning overlay district to encourage and allow for flexible site design to further reduce impervious surface within and adjacent to lakes, floodplains and wetlands	PC		PD, TB
3.2	Review the existing residential Cluster Option standards in conjunction with constructed projects to gauge how they have achieved the intended open space preservation; evaluate if any refinements to standards are needed.	PC		PD, TB
3.3	Assess the Zoning Ordinance standards for stormwater management to ensure alignment with best practices.	PC		PD, TB
Advocacy Action Strategies				
3.4	Promote cluster developments where development pressure exists to preserve open space, natural features and viewsheds.	TB		PD
Capital Improvement Action Strategies				
3.5	Identify parcels adjacent to the environmentally sensitive areas and budget for grant and funding opportunities for acquisition and enhancement as appropriate.	TB		PD

Goal 4 | TRANSPORTATION

Objectives

- Maintain the pathway along Grand River Avenue through the Township.
- Allow and encourage the mix of commercial and residential uses along the Grand River corridor.
- Partner with county and state road agencies to support non-motorized travel, improve safety and mitigate traffic congestion.
- Maintain local roads under Township jurisdiction.
- Partner with local and regional agencies to develop transit options.
- Create a Complete Street network in the Township to allow residents opportunities to safely access community destinations through a variety of modes, including additional pathways and crossings.
- Prioritize the Dorr Road highway crossing for pedestrian accommodations when improvements are made

Type of Action Strategy	Lead Body	Time Frame	Supporting Partners
Zoning Action Strategies			
4.1 Update the zoning standards for non-motorized pathways and sidewalks to increase the width of shared use paths (called “bike paths” in the ordinance to 10 feet wide.	PC		PD
4.2 Update parking standards to promote adaptive reuse of unused parking areas, promote the installation of EV infrastructure, and accommodate the recent trends of drive up and curbside pickup uses while mitigating the impacts to pedestrian circulation.	PC		PD
Advocacy Action Strategies			
4.3 Adopt a complete streets policy and ordinance as recommended in this plan.	TB		PD
4.4 Work with the Livingston County Road Commission to ensure the safe sharing of the road for motorized and non-motorized activity.	TB		PD, LCRC
4.5 Partner with county and state road agencies and the surrounding communities (Marion Township, Oceola Township, Brighton Township and Hamburg Township) to monitor the transportation network and coordinate potential road improvements in and around the Township to mitigate traffic congestion from changes in development.	TB		PD
Capital Improvement Action Strategies			
4.6 Coordinate non-motorized improvements with other capital improvements to create cost efficiencies.	TB		PD
4.7 Address pedestrian connectivity through the Latson interchange areas.	PC		PD
4.8 Coordinate with MDOT and the Livingston County Road Commission to ensure the reconstruction of any bridge within the Township, particularly Dorr Road and others traversing I-96, should be designed and built to accommodate non-motorized infrastructure	TB		TB, LCRC & MDOT



Goal 5 | PUBLIC FACILITIES AND SERVICES

Objectives

- Plan for infrastructure improvements and ongoing proactive management of local utilities, facilities, and roads.
- Partner with local agencies to ensure long-term management of local infrastructure.
- Maintain and enhance recreational amenities at the Township Park to accommodate the needs of current and future residents of all ages and abilities.
- Partner with adjacent communities, local agencies, and the county to provide recreational facilities and programs for residents.
- Identify alternative funding sources for infrastructure and recreation improvements.
- Encourage installation of alternative energy facilities, including solar.

Type of Action Strategy	Lead Body	Time Frame	Supporting Partners
Zoning Action Strategies			
5.1 Identify areas that are suitable for alternative energy facilities and create/update the zoning ordinance standards to accommodate solar, wind and electric vehicle charging facilities.	PC		PD
Advocacy Action Strategies			
5.2 Review and update the Township recreation plan every five years, consistent with the Michigan Department of Natural Resources standards	TB		PD
5.3 Ensure that parks and recreation facilities are accessible for residents of all ages and abilities by conducting an accessibility audit and incorporating needed upgrades into future recreation plans	TB		PD
5.4 Develop a marketing plan, and work with state utility providers, such as DTE and Consumers Energy, to attract solar energy facilities to identified areas in the Township.	TB		PD
Capital Improvement Action Strategies			
5.5 Coordinate capital improvement plans (CIP) with Parks and Recreation projects to maximize efficiency	TB		PD
5.6 Establish a capital improvement policy and update it annually to align with Township budget approval	TB		PD
5.7 Identify grant opportunities and include matching funds in CIP budgeting	TB		PD
5.8 Explore the development of combined or adjoining school, park, and recreational facilities to ensure maximum and efficient use and to reduce land costs	TB		PD

APPENDIX

I-96/Latson Road Subarea Plan (2013)

E. I-96/Latson Road Subarea Plan

At the time this Master Plan update was prepared, a new full service I-96 interchange was under construction at Latson Road. The new interchange includes an overpass connecting Latson and Nixon Roads and a widening to five lanes between Grand River Avenue and the C.S.X. Railroad tracks. Nixon Road, renamed to S. Latson Road, would be improved to a paved, two lane roadway from the railroad south to Chilson Road. Grand Oaks Drive and Beck Road have been realigned to accommodate the interchange ramps.

With the development of the new interchange, Latson Road will be an important gateway to both north and south Genoa Township. Access to the area south of I-96 will dramatically change, necessitating a specific subarea plan to guide development decisions. The subarea plan is intended to address the following:

- Manage traffic around the new I-96 interchange and the intersection of Latson and Grand River Avenue to maintain a level of service that will meet the needs of travelers, protect the significant investment of the interchange, and allow some well-managed intensification of land use near the interchange.
- Encourage high-quality design for the land uses surrounding the interchange to create a gateway that presents a positive image to the community for residents, businesses and visitors.
- Protect the established rural and suburban residential areas south of I-96 through preservation of natural features, limiting density and preventing the intrusion of nonresidential uses outside of identified boundaries where land use change has been planned.
- Identify a secondary area along S. Latson Road where some additional land use change may be considered once a principal use has been established and approved.

The Latson Road Subarea Plan includes the following recommendations for when the interchange is completed, as illustrated on the subarea map (See Map 10):

- The land on the east and west side of Latson Road between I-96 and Grand River Avenue is planned for Regional Commercial and will be rezoned for a mixed-use PUD (NR-PUD). This PUD should include the following:
 - A diversified mixture of uses that may include commercial and office/research and development.
 - A mixture of uses that will diversify traffic generated from the site by spreading out the peak hour over times that minimize impact to the interchange's peak hour traffic.

Planning for the Latson/Nixon Road Corridor when the I-96 interchange is completed:

- *Manage traffic and access around interchange.*
- *Create community gateway with distinctive character.*
- *Diversified mixture of land uses.*
- *High quality architecture.*
- *Streetscape and landscaping improvements along Latson and Grand River.*
- *Protect character of rural residential neighborhoods south of I-96.*
- *Reevaluate the plan yearly to respond to development and market factors.*

- Access management that will minimize the number of driveways and protect the efficiency of traffic flow along Latson Road between the interchange and Grand River Avenue.
- Distinct and prominent architectural features of enhanced character, which reflect the importance of the site's location and create a positive visual landmark for this gateway to the community.
- Extensive landscaping along Latson Road and Grand River Avenue to enhance the appearance of these corridors and the gateway to the community.
- Uniformity in design through coordination of architectural styles, landscaping, ornamental lighting, pedestrian circulation and vehicular access.
- The areas immediately south of the interchange along S. Latson Road are planned for Interchange Commercial, as described in Section B above. This area is intended to accommodate the needs of interstate traffic and should complement, not duplicate the commercial areas north along Latson and Grand River.
- The areas adjacent to the Interchange Commercial area as depicted on the map are planned for Interchange Campus uses. This area can be served by utility extensions and is intended to be a well-planned, campus setting.
- Residential development along S. Latson Road south of the Interchange Campus area will remain at large lot residential densities. The intent is to protect the residential character and natural features through lower density development (Future Transition Area on Map X).
- As the areas designated for Interchange Commercial and Campus are approved for significant development, areas south currently planned residential should be reevaluated for potential supporting uses, conditional upon the utility and roadway capacities, as shown as Future Transition Area on Map 10. This plan is intended to be flexible, balancing the impacts of new development on the infrastructure system, accommodating new uses dependent on surrounding uses, and limiting the negative impacts on existing nearby uses.

Interchange Commercial Examples



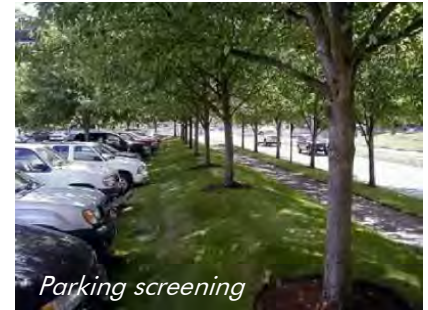
South Latson Interchange Design Guidelines

Streetscape

Streetscape improvements, such as street lights, landscaping, wayfinding signage, and pathways, should be integrated into the interchange commercial and campus developments. This will contribute to the unified, high-quality development the Township would like to project at the new interchange.

- As part of the development of the South Latson campus, a landscaped median should be installed south of the railroad. This will not only help beautify the corridor but improve safety by restricting left-turns.

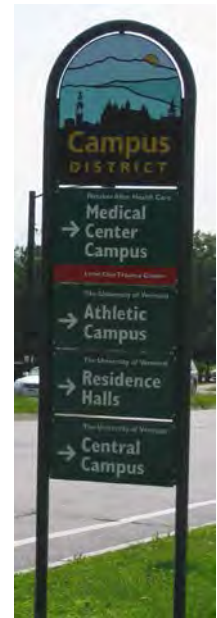
- Ornamental street lighting should be included along South Latson and within the new development itself to contribute toward the site's unified design.
- South Latson should be well landscaped, not only in the median, but along the frontage, with street trees and knee walls or hedgerows screening parking.
- Gateway and wayfinding signs should be installed at the interchange welcoming visitors to the Township and directing them to major landmarks. This signage should be consistent with that proposed along Grand River and for the Town Center. Elements of a gateway entrance sign should include lighting, landscaping, and masonry material.
- Pathways should be installed on both sides of South Latson and connect to the interior of the site. Buildings and parking should all have pedestrian connections to the pathway network.



Access and Circulation

In order to efficiently accommodate new traffic that is likely to result from new development, having a coordinated circulation and access plan is essential.

- A signalized intersection should be located approximately $\frac{1}{4}$ mile south of the railroad at Sweet Road. This should be the primary entrance to campus Area A as identified on the Subarea Map.
- An additional entrance to Area A should be located halfway between the signalized intersection and the railroad tracks and be right-in/right-out.
- Area A's ring road should be sensitive of the wetland/wooded area in its southeast corner and provide stub roads for future connections to the south.
- Area B should be accessed via the newly realigned Beck Road which can be extended and configured into a loop road.
- Area B's loop road should be sensitive to the wetland/natural areas at the south of the site.
- Auxiliary campus uses on the east side of South Latson across from Area A should be primarily accessed via the signalized intersection. Additional access points north and south of the signalized intersection should be right-in/right-out. A frontage road will help provide convenient access for these businesses and should continue south for future connections.
- No access points other than Beck Road should be allowed on South Latson at the interchange north of the railroad tracks. Businesses fronting South Latson at this location should share access off Beck Road.



- Access to the Future Transition Area should be integrated into the overall circulation plan for Areas A and B.
- Further access management standards are included in the Township's zoning ordinance and MDOT's Access Management Manual

Building and Site Design

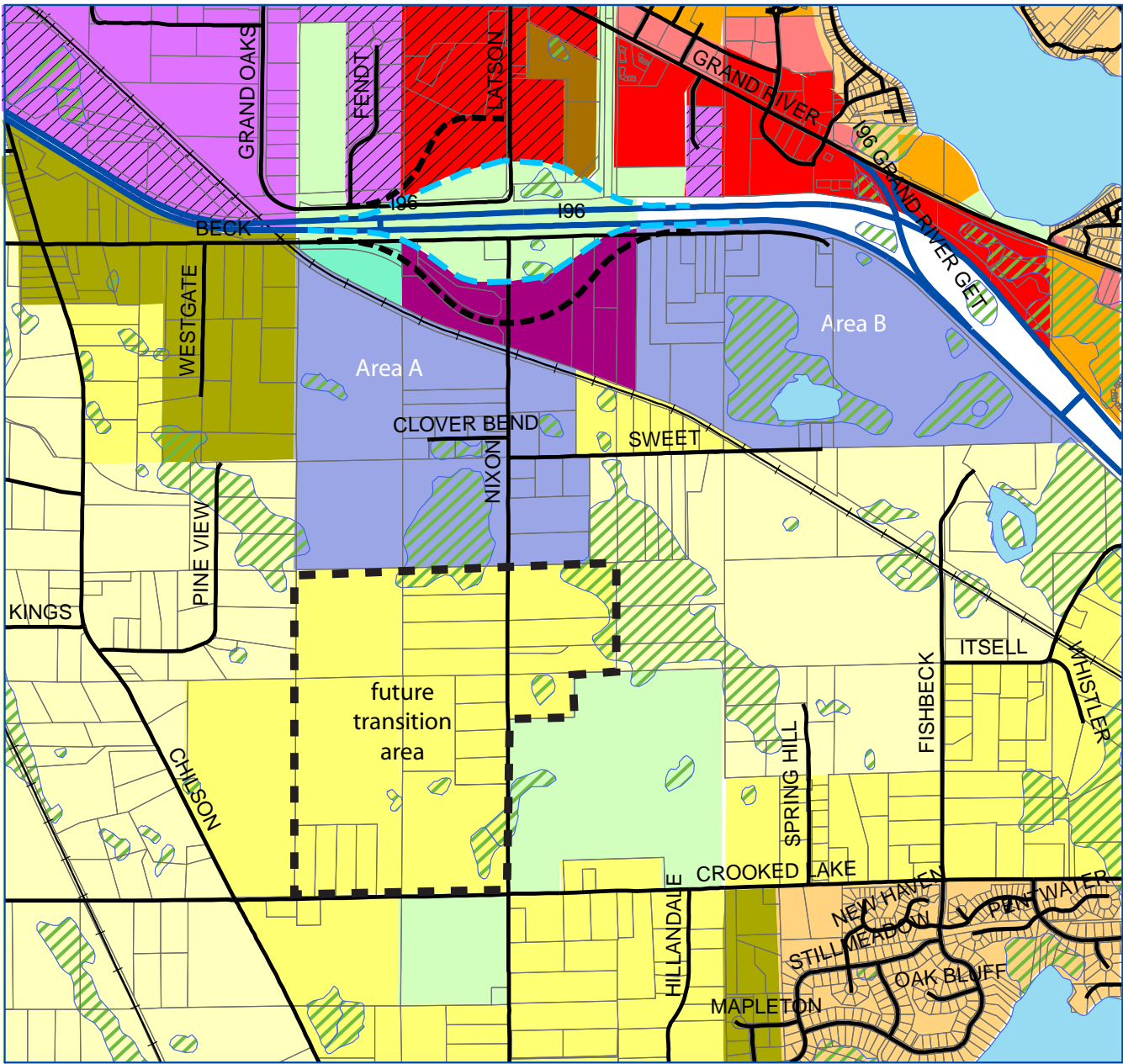
In order to establish a cohesive, high-quality campus at the South Latson interchange, it will be important to have consistent building and site design features.

- Entrances should be well defined and easily accessible by pedestrians.
- Buildings should orient toward South Latson where possible with parking given a less dominant presence along the corridor.
- Parking should be buffered with landscaping or decorative fencing.
- Understanding that a user like a hospital may need several stories for its patient wings, this plan seeks not to require a maximum building height. More importantly, any new building built along South Latson fronting the corridor should be built at a pedestrian scale at its Latson frontage.
- Stormwater should be consolidated and treated through low-impact design and retention ponds that contribute to the existing natural character of the site.
- Building orientation should be sensitive to wetlands and existing natural features and be situated to maximize the sight lines and pedestrian access to enjoy them.
- Materials should be of high quality brick, stone, glass, or similar, reflective of a well-designed modern research park or medical campus.
- Loading zones and waste receptacles should be well delineated and appropriately screened (see zoning ordinance).
- Lighting should be directed downward and fully shielded to eliminate an outward or upward glare, providing for adequate public safety without overly illuminating a site or building.
- Site lighting should consist of decorative fixtures, such as goose neck fixtures, and be architecturally integrated with the building style, materials and color. Pole fixtures should be located within landscaped islands or behind the curb or sidewalk.
- Monument signs should be well landscaped and have masonry bases.



- Signs should be comprised of an interesting design that adds interest to the business and the streetscape. Signs that have the appearance of a box sign are discouraged.
- Signs should be architecturally integrated with their surroundings in terms of size, shape, color, texture and lighting and not promote visual competition with other signs in the area.





- | | | | |
|---|--------------------------------|--------------------------------|--|
| AGRICULTURE/COUNTRY ESTATE - 5 acres per unit | NEIGHBORHOOD COMMERCIAL | INTERCHANGE CAMPUS | interchange transition area - future land use and the utility service area will be reconsidered in this area concurrent with a proposal for actual campus uses |
| LARGE LOT RURAL RESIDENTIAL - 2 acres per unit | GENERAL COMMERCIAL | INTERCHANGE COMMERCIAL | |
| LOW DENSITY RESIDENTIAL - 1 acre per unit | REGIONAL COMMERCIAL | Beck and Grand Oaks Relocation | |
| SMALL LOT SINGLE FAMILY RESIDENTIAL - 2 to 3 units per acre | MIXED-USE TOWN CENTER | New Ramps | |
| MEDIUM DENSITY RESIDENTIAL - 5 units per acre | OFFICE | I-96 | |
| HIGH DENSITY RESIDENTIAL - 8 units per acre | INDUSTRIAL | Wetlands | |
| MANUFACTURED HOUSING | RESEARCH AND DEVELOPMENT | | |
| | PUBLIC/INSTITUTIONAL/UTILITIES | | |
| | PRIVATE RECREATION | | |

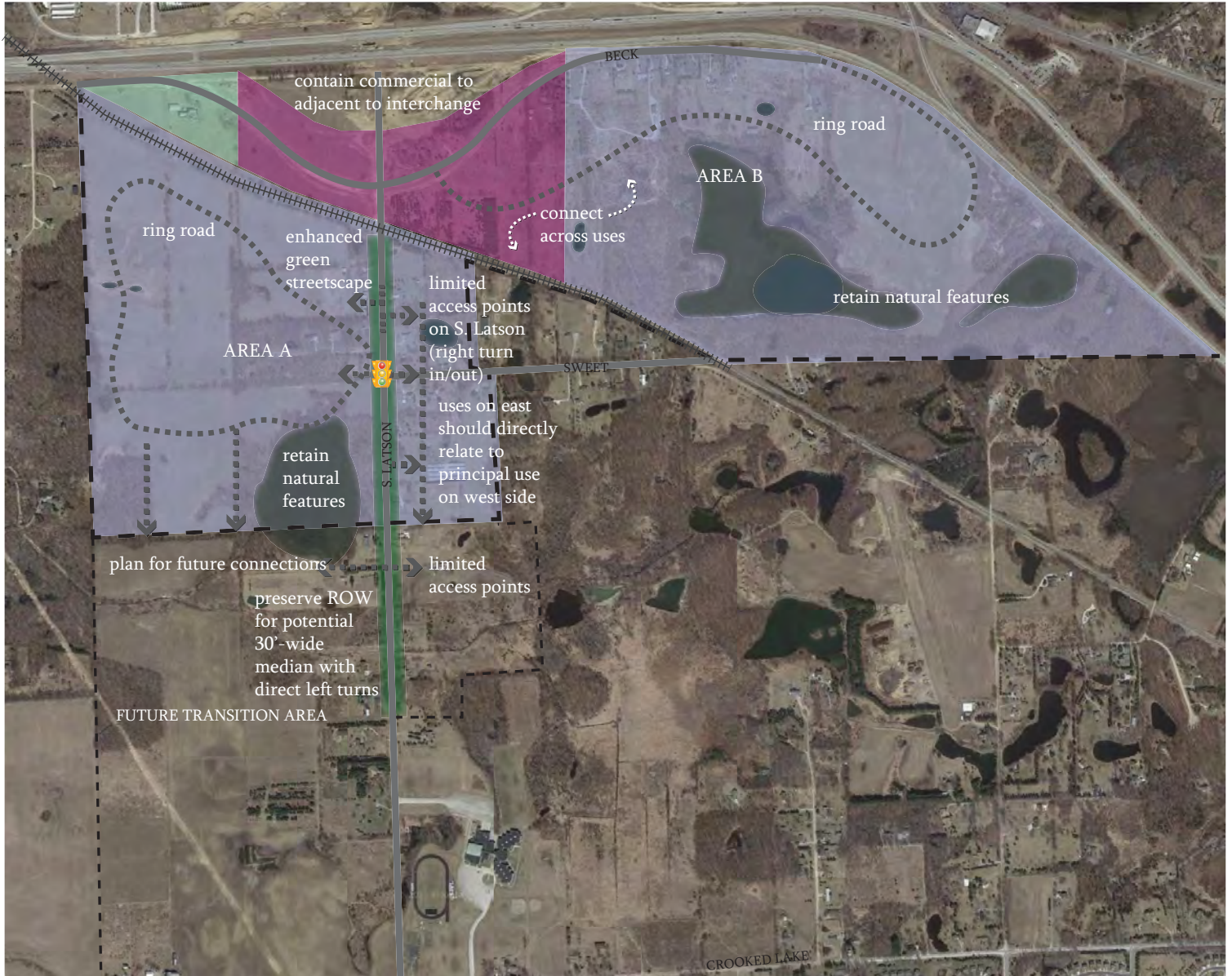
Map 10:
I-96 Interchange
Latson/Nixon Road Subarea Plan



October 2013

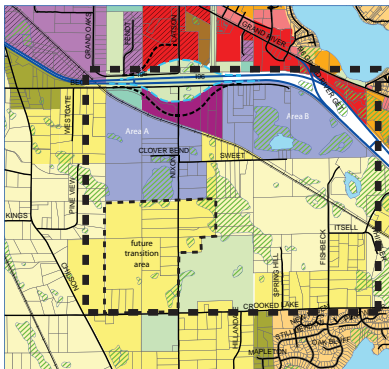
Data Sources:
Base Map: Genoa Township





I-96/Latson Subarea Schematic Plan

- Office
- Interchange Campus
- Interchange Commercial



Future Transition Area - future land use and the utility service area will be reconsidered in this area as the campus area is developed with primary uses



Draft: 10-17-13



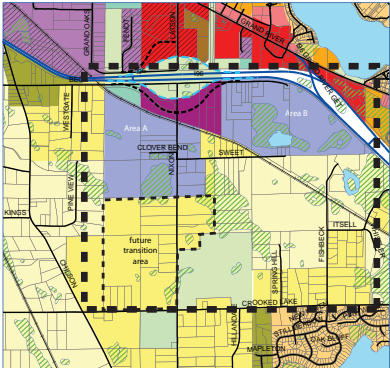
Image Source: Google





I-96/Latson Subarea
Concept Plan
Map 12

This Concept Plan is meant to illustrate the principles of the Future Land Use categories of Interchange Campus and Commercial. This is not intended to be a detailed plan that will be built as indicated, but as a reference for the general circulation, building, greenspace, and connectivity/access concepts for the redevelopment of this area.



Future Transition Area - future land use and the utility service area will be reconsidered in this area as the campus area is developed with primary uses



10-22-13



Image Source: Google





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